

S P E C I F I C A T I O N

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4. SPECIFICATION

Part Number (8PIN)		Marking	PACKING	Contact Form
EPR212A068000(Z)	DIP / 60VAC&DC	EPR82A06T	45 pcs/Tube	2A
EPR312A068000(Z)	SMD / 60VAC&DC	EPR82A06M	45 pcs/Tube	
EPR312A068100(Z)	SMD / 60VAC&DC	EPR82A06M	1000 pcs/Tape & reel	
EPR412A068000(Z)	SOP / 60VAC&DC	EPR82A06S	50 pcs/Tube	
EPR412A068100(Z)	SOP / 60VAC&DC	EPR82A06S	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage	V _R			5	V	I _R =10μA
	Control current	I _{Fopr}	5		50	mA	
Output	Load voltage (AC peak or DC)	V _L	60			V	
	Continuous Rated Load Current	SOP	I _L		350	mA	I _F =10mA
		DIP/SMD		400			
	Peak current	SOP	I _{Lpeak}		600	mA	10ms
		DIP/SMD		700			
	On-state resistance	R _{ON}		1.0	1.4	Ohm	I _F =10mA, I _L =rating
	Off-state Leakage current	I _{LK}			1	μA	I _F =0mA, V _L =rating
	Turn-On Time	T _{ON}		0.2	0.5	ms	I _F =10mA, V _L =rating, I _L =rating
Turn-Off Time	T _{OFF}		0.03	0.3	ms		
Output Capacitance	C _{OUT}		150		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

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Part Number (8PIN)		Marking	PACKING	Contact Form
EPR212A208000(Z)	DIP / 200VAC&DC	EPR82A20T	45 pcs/Tube	2A
EPR312A208000(Z)	SMD / 200VAC&DC	EPR82A20M	45 pcs/Tube	
EPR312A208100(Z)	SMD / 200VAC&DC	EPR82A20M	1000 pcs/Tape & reel	
EPR412A208000(Z)	SOP / 200VAC&DC	EPR82A20S	50 pcs/Tube	
EPR412A208100(Z)	SOP / 200VAC&DC	EPR82A20S	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage	V _R			5	V	I _R =10μA
	Control current	I _{Fopr}	5		50	mA	
Output	Load voltage (AC peak or DC)	V _L	200			V	
	Continuous Rated Load Current	SOP	I _L		150	mA	I _F =10mA
		DIP/SMD		200			
	Peak current	SOP	I _{Lpeak}		300	mA	10ms
		DIP/SMD		400			
	On-state resistance	R _{ON}		6	10	Ohm	I _F =10mA, I _L =rating
	Off-state Leakage current	I _{LK}			1	μA	I _F =0mA, V _L =rating
	Turn-On Time	T _{ON}		0.2	0.5	ms	I _F =10mA, V _L =rating, I _L =rating
Turn-Off Time	T _{OFF}		0.03	0.3	ms		
Output Capacitance	C _{OUT}		100		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

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Part Number (8PIN)		Marking	PACKING	Contact Form
EPR212A408000(Z)	DIP / 400VAC&DC	EPR82A40T	45 pcs/Tube	2A
EPR312A408000(Z)	SMD / 400VAC&DC	EPR82A40M	45 pcs/Tube	
EPR312A408100(Z)	SMD / 400VAC&DC	EPR82A40M	1000 pcs/Tape & reel	
EPR412A408000(Z)	SOP / 400VAC&DC	EPR82A40S	50 pcs/Tube	
EPR412A408100(Z)	SOP / 400VAC&DC	EPR82A40S	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	VF	1.0		1.4	V	IF=10mA
	Reverse voltage	VR			5	V	IR=10μA
	Control current	IF _{opr}	5		50	mA	
Output	Load voltage (AC peak or DC)	VL	400			V	
	Continuous Rated Load Current	SOP	IL		100	mA	IF=10mA
		DIP/SMD		130			
	Peak current	SOP	IL _{peak}		250	mA	10ms
		DIP/SMD		300			
	On-state resistance	R _{ON}		20	30	Ohm	IF=10mA,IL=rating
	Off-state Leakage current	I _{LK}			1	μA	IF=0mA,VL=rating
	Turn-On Time	T _{ON}		0.2	0.5	ms	IF=10mA,VL=rating, IL=rating
Turn-Off Time	T _{OFF}		0.03	0.3	ms		
Output Capacitance	C _{OUT}		70		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H.≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

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Part Number (8PIN)		Marking	PACKING	Contact Form
EPR212B208000(Z)	DIP / 200VAC&DC	EPR82B20T	45 pcs/Tube	2B
EPR312B208000(Z)	SMD / 200VAC&DC	EPR82B20M	45 pcs/Tube	
EPR312B208100(Z)	SMD / 200VAC&DC	EPR82B20M	1000 pcs/Tape & reel	
EPR412B208000(Z)	SOP / 200VAC&DC	EPR82B20S	50 pcs/Tube	
EPR412B208100(Z)	SOP / 200VAC&DC	EPR82B20S	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage	V _R			5	V	I _R =10μA
	Control current	I _{Fopr}	5		50	mA	
Output	Load voltage (AC peak or DC)	V _L	200			V	
	Continuous Rated Load Current	SOP	I _L		80	mA	I _F =0mA
		DIP/SMD		100			
	Peak current	SOP	I _{Lpeak}		200	mA	10ms
		DIP/SMD		250			
	On-state resistance	R _{ON}		17	30	Ohm	I _F =0mA, I _L =rating
	Off-state Leakage current	I _{LK}			10	μA	I _F =5mA, V _L =rating
	Turn-On Time	T _{ON}		0.03	0.5	ms	I _F =10mA, V _L =rating, I _L =rating
Turn-Off Time	T _{OFF}		0.4	1.0	ms		
Output Capacitance	C _{OUT}		200		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

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Part Number (8PIN)		Marking	PACKING	Contact Form
EPR212B408000(Z)	DIP / 400VAC&DC	EPR82B40T	45 pcs/Tube	2B
EPR312B408000(Z)	SMD / 400VAC&DC	EPR82B40M	45 pcs/Tube	
EPR312B408100(Z)	SMD / 400VAC&DC	EPR82B40M	1000 pcs/Tape & reel	
EPR412B408000(Z)	SOP / 400VAC&DC	EPR82B40S	50 pcs/Tube	
EPR412B408100(Z)	SOP / 400VAC&DC	EPR82B40S	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage	V _R			5	V	I _R =10μA
	Control current	I _{Fopr}	5		50	mA	
Output	Load voltage (AC peak or DC)	V _L	400			V	
	Continuous Rated Load Current	SOP	I _L		80	mA	I _F =0mA
		DIP/SMD		100			
	Peak current	SOP	I _{Lpeak}		200	mA	10ms
		DIP/SMD		250			
	On-state resistance	R _{ON}		25	50	Ohm	I _F =0mA, I _L =rating
	Off-state Leakage current	I _{LK}			10	μA	I _F =5mA, V _L =rating
	Turn-On Time	T _{ON}		0.03	0.5	ms	I _F =10mA, V _L =rating, I _L =rating
Turn-Off Time	T _{OFF}		0.4	1.0	ms		
Output Capacitance	C _{OUT}		200		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

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Part Number (8PIN)	Marking	PACKING	Contact Form
EPR211C408000(Z) DIP / 400VAC&DC	EPR81C40T	45 pcs/Tube	1C
EPR311C408000(Z) SMD / 400VAC&DC	EPR81C40M	45 pcs/Tube	
EPR311C408100(Z) SMD / 400VAC&DC	EPR81C40M	1000 pcs/Tape & reel	
EPR411C408000(Z) SOP / 400VAC&DC	EPR81C40S	50 pcs/Tube	
EPR411C408100(Z) SOP / 400VAC&DC	EPR81C40S	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM			Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage		VF	1.0		1.4	V	IF=10mA
	Reverse voltage		VR			5	V	IR=10µA
	Control current		IF _{opr}	5		50	mA	
Output	Load voltage (AC peak or DC)		VL	400			V	
	Continuous Rated Load Current	PIN 7-8	SOP	IL		80	mA	IF=0mA
			DIP/SMD			100		
		PIN 5-6	SOP	IL		100	mA	IF=10mA
			DIP/SMD			130		
	Peak current	PIN 7-8	SOP	IL _{peak}		200	mA	10ms
			DIP/SMD			250		
		PIN 5-6	SOP	IL _{peak}		240	mA	10ms
			DIP/SMD			300		
	On-state resistance	PIN 7-8	R _{ON}		25	50	Ohm	IF=0mA, IL=rating
				PIN 5-6		20		30
	Off-state Leakage current	PIN 7-8	I _{LK}			10	µA	IF=5mA, VL=rating
				PIN 5-6				1
Turn-On Time	PIN 7-8	T _{ON}		0.03	0.5	ms	IF=10mA VL=rating, IL=rating	
			PIN 5-6		0.2			0.5
Turn-Off Time	PIN 7-8	T _{OFF}		0.4	1.0	ms		
			PIN 5-6		0.03			0.3
Output Capacitance	PIN 7-8	C _{OUT}		200		pF	f=1MHz	
			PIN 5-6		70			
Input/Output	I/O Capacitance		C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min	
		DIP/SMD		3750				
I/O Isolation resistance		R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)					
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)					

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Part Number (8PIN)	Marking	PACKING	Contact Form
EPR211C208000(Z) DIP / 200VAC&DC	EPR81C20T	45 pcs/Tube	1C
EPR311C208000(Z) SMD / 200VAC&DC	EPR81C20M	45 pcs/Tube	
EPR311C208100(Z) SMD / 200VAC&DC	EPR81C20M	1000 pcs/Tape & reel	
EPR411C208000(Z) SOP / 200VAC&DC	EPR81C20S	50 pcs/Tube	
EPR411C208100(Z) SOP / 200VAC&DC	EPR81C20S	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM			Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage		VF	1.0		1.4	V	IF=10mA
	Reverse voltage		VR			5	V	IR=10µA
	Control current		IF _{opr}	5		50	mA	
Output	Load voltage (AC peak or DC)		VL	200			V	
	Continuous Rated Load Current	PIN 7-8	SOP	IL		80	mA	IF=0mA
			DIP/SMD		100			
		PIN 5-6	SOP	IL		150	mA	IF=10mA
			DIP/SMD		200			
	Peak current	PIN 7-8	SOP	IL _{peak}		200	mA	10ms
			DIP/SMD		250			
		PIN 5-6	SOP	IL _{peak}		300	mA	10ms
			DIP/SMD		400			
	On-state resistance	PIN 7-8	R _{ON}		17	30	Ohm	IF=0mA, IL=rating
				PIN 5-6	6	10		IF=10mA, IL=rating
	Off-state Leakage current	PIN 7-8	I _{LK}			10	µA	IF=5mA, VL=rating
				PIN 5-6		1		IF=0mA, VL=rating
Turn-On Time	PIN 7-8	T _{ON}		0.03	0.5	ms	IF=10mA VL=rating, IL=rating	
			PIN 5-6	0.2	0.5			
Turn-Off Time	PIN 7-8	T _{OFF}		0.4	1.0	ms		
			PIN 5-6	0.03	0.3			
Output Capacitance	PIN 7-8	C _{OUT}		200		pF	f=1MHz	
			PIN 5-6	100				
Input/ Output	I/O Capacitance		C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min	
		DIP/SMD		3750				
I/O Isolation resistance		R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)					
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)					

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Part Number (8PIN)	Marking	PACKING	Contact Form
EPR202A068000(Z) DIP / 60VDC	EPR82A06F	45 pcs/Tube	2A
EPR302A068000(Z) SMD / 60VDC	EPR82A06N	45 pcs/Tube	
EPR302A068100(Z) SMD / 60VDC	EPR82A06N	1000 pcs/Tape & reel	
EPR402A068000(Z) SOP / 60VDC	EPR82A06K	50 pcs/Tube	
EPR402A068100(Z) SOP / 60VDC	EPR82A06K	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage	V _R			5	V	I _R =10μA
	Control current	I _{Fopr}	5		50	mA	
Output	Load voltage (DC)	V _L	60			V	
	Continuous Rated Load Current	SOP	I _L		350	mA	I _F =10mA
		DIP/SMD		400			
	Peak current	SOP	I _{Lpeak}		600	mA	10ms
		DIP/SMD		700			
	On-state resistance	R _{ON}		0.5	0.8	Ohm	I _F =10mA, I _L =rating
	Off-state Leakage current	I _{LK}			1	μA	I _F =0mA, V _L =rating
	Turn-On Time	T _{ON}		0.2	0.5	ms	I _F =10mA, V _L =rating, I _L =rating
Turn-Off Time	T _{OFF}		0.03	0.3	ms		
Output Capacitance	C _{OUT}		-		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

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Part Number (8PIN)	Marking	PACKING	Contact Form
EPR202A208000(Z) DIP / 200VDC	EPR82A20F	45 pcs/Tube	2A
EPR302A208000(Z) SMD / 200VDC	EPR82A20N	45 pcs/Tube	
EPR302A208100(Z) SMD / 200VDC	EPR82A20N	1000 pcs/Tape & reel	
EPR402A208000(Z) SOP / 200VDC	EPR82A20K	50 pcs/Tube	
EPR402A208100(Z) SOP / 200VDC	EPR82A20K	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage	V _R			5	V	I _R =10μA
	Control current	I _{Fopr}	5		50	mA	
Output	Load voltage (DC)	V _L	200			V	
	Continuous Rated Load Current	SOP	I _L		150	mA	I _F =10mA
		DIP/SMD		200			
	Peak current	SOP	I _{Lpeak}		300	mA	10ms
		DIP/SMD		400			
	On-state resistance	R _{ON}		4	6	Ohm	I _F =10mA, I _L =rating
	Off-state Leakage current	I _{LK}			1	μA	I _F =0mA, V _L =rating
	Turn-On Time	T _{ON}		0.2	0.5	ms	I _F =10mA, V _L =rating, I _L =rating
Turn-Off Time	T _{OFF}		0.03	0.3	ms		
Output Capacitance	C _{OUT}		-		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

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Part Number (8PIN)	Marking	PACKING	Contact Form
EPR202A408000(Z) DIP / 400VDC	EPR82A40F	45 pcs/Tube	2A
EPR302A408000(Z) SMD / 400VDC	EPR82A40N	45 pcs/Tube	
EPR302A408100(Z) SMD / 400VDC	EPR82A40N	1000 pcs/Tape & reel	
EPR402A408000(Z) SOP / 400VDC	EPR82A40K	50 pcs/Tube	
EPR402A408100(Z) SOP / 400VDC	EPR82A40K	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage	V _R			5	V	I _R =10μA
	Control current	I _{Fopr}	5		50	mA	
Output	Load voltage (DC)	V _L	400			V	
	Continuous Rated Load Current	SOP	I _L		100	mA	I _F =10mA
		DIP/SMD		130			
	Peak current	SOP	I _{Lpeak}		240	mA	10ms
		DIP/SMD		300			
	On-state resistance	R _{ON}		13	17	Ohm	I _F =10mA, I _L =rating
	Off-state Leakage current	I _{LK}			1	μA	I _F =0mA, V _L =rating
	Turn-On Time	T _{ON}		0.2	0.5	ms	I _F =10mA, V _L =rating, I _L =rating
Turn-Off Time	T _{OFF}		0.03	0.3	ms		
Output Capacitance	C _{OUT}		-		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

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Part Number (8PIN)	Marking	PACKING	Contact Form
EPR202B208000(Z) DIP / 200VDC	EPR82B20F	45 pcs/Tube	2B
EPR302B208000(Z) SMD / 200VDC	EPR82B20N	45 pcs/Tube	
EPR302B208100(Z) SMD / 200VDC	EPR82B20N	1000 pcs/Tape & reel	
EPR402B208000(Z) SOP / 200VDC	EPR82B20K	50 pcs/Tube	
EPR402B208100(Z) SOP / 200VDC	EPR82B20K	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage	V _R			5	V	I _R =10μA
	Control current	I _{Fopr}	5		50	mA	
Output	Load voltage (DC)	V _L	200			V	
	Continuous Rated Load Current	SOP	I _L		80	mA	I _F =0mA
		DIP/SMD		100			
	Peak current	SOP	I _{Lpeak}		200	mA	10ms
		DIP/SMD		250			
	On-state resistance	R _{ON}		12	16	Ohm	I _F =0mA, I _L =rating
	Off-state Leakage current	I _{LK}			10	μA	I _F =5mA, V _L =rating
	Turn-On Time	T _{ON}		0.03	0.5	ms	I _F =10mA, V _L =rating, I _L =rating
Turn-Off Time	T _{OFF}		0.4	1.0	ms		
Output Capacitance	C _{OUT}		-		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

S P E C I F I C A T I O N

Edition

3

Part Number (8PIN)	Marking	PACKING	Contact Form
EPR202B408000(Z) DIP / 400VDC	EPR82B40F	45 pcs/Tube	2B
EPR302B408000(Z) SMD / 400VDC	EPR82B40N	45 pcs/Tube	
EPR302B408100(Z) SMD / 400VDC	EPR82B40N	1000 pcs/Tape & reel	
EPR402B408000(Z) SOP / 400VDC	EPR82B40K	50 pcs/Tube	
EPR402B408100(Z) SOP / 400VDC	EPR82B40K	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM		Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage	V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage	V _R			5	V	I _R =10μA
	Control current	I _{Fopr}	5		50	mA	
Output	Load voltage (DC)	V _L	400			V	
	Continuous Rated Load Current	SOP	I _L		80	mA	I _F =0mA
		DIP/SMD		100			
	Peak current	SOP	I _{Lpeak}		200	mA	10ms
		DIP/SMD		250			
	On-state resistance	R _{ON}		15	26	Ohm	I _F =0mA, I _L =rating
	Off-state Leakage current	I _{LK}			10	μA	I _F =5mA, V _L =rating
	Turn-On Time	T _{ON}		0.03	0.5	ms	I _F =10mA, V _L =rating, I _L =rating
Turn-Off Time	T _{OFF}		0.4	1.0	ms		
Output Capacitance	C _{OUT}		-		pF	f=1MHz	
Input/ Output	I/O Capacitance	C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min
		DIP/SMD		3750			
I/O Isolation resistance	R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating	T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage	T _{STG}	-40°C to +100°C (-40°F to +212°F)				

S P E C I F I C A T I O N

Edition

3

Part Number (8PIN)	Marking	PACKING	Contact Form
EPR201C408000(Z) DIP / 400VDC	EPR81C40F	45 pcs/Tube	1C
EPR301C408000(Z) SMD / 400VDC	EPR81C40N	45 pcs/Tube	
EPR301C408100(Z) SMD / 400VDC	EPR81C40N	1000 pcs/Tape & reel	
EPR401C408000(Z) SOP / 400VDC	EPR81C40K	50 pcs/Tube	
EPR401C408100(Z) SOP / 400VDC	EPR81C40K	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

ITEM			Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage		V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage		V _R			5	V	I _R =10μA
	Control current		I _{Fopr}	5		50	mA	
Output	Load voltage (DC)		V _L	400			V	
	Continuous Rated Load Current	PIN 7-8	SOP	I _L		80	mA	I _F =0mA
			DIP/SMD			100		
		PIN 5-6	SOP	I _L		100	mA	I _F =10mA
			DIP/SMD			130		
	Peak current	PIN 7-8	SOP	I _{Lpeak}		200	mA	10ms
			DIP/SMD			250		
		PIN 5-6	SOP	I _{Lpeak}		240	mA	10ms
			DIP/SMD			300		
	On-state resistance	PIN 7-8	R _{ON}			15	Ohm	I _F =0mA, I _L =rating
						PIN 5-6		
	Off-state Leakage current	PIN 7-8	I _{LK}			10	μA	I _F =5mA, V _L =rating
						PIN 5-6		
Turn-On Time	PIN 7-8	T _{ON}			0.03	ms	I _F =10mA V _L =rating, I _L =rating	
					PIN 5-6			0.2
Turn-Off Time	PIN 7-8	T _{OFF}			0.4	ms		
					PIN 5-6			0.03
Output Capacitance	PIN 7-8	C _{OUT}			-	pF	f=1MHz	
					PIN 5-6			-
Input/ Output	I/O Capacitance		C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min	
		DIP/SMD		3750				
I/O Isolation resistance		R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating		T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage		T _{STG}	-40°C to +100°C (-40°F to +212°F)				

S P E C I F I C A T I O N

Edition

3

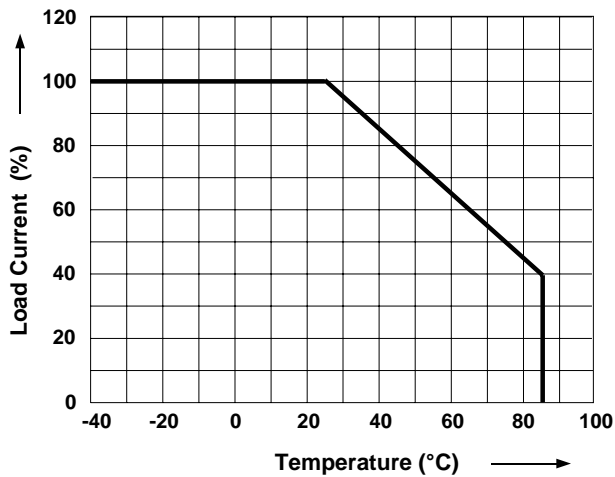
Part Number (8PIN)	Marking	PACKING	Contact Form
EPR201C208000(Z) DIP / 200VDC	EPR81C20F	45 pcs/Tube	1C
EPR301C208000(Z) SMD / 200VDC	EPR81C20N	45 pcs/Tube	
EPR301C208100(Z) SMD / 200VDC	EPR81C20N	1000 pcs/Tape & reel	
EPR401C208000(Z) SOP / 200VDC	EPR81C20K	50 pcs/Tube	
EPR401C208100(Z) SOP / 200VDC	EPR81C20K	2000 pcs/Tape & reel	

Electrical characteristics (Ambient temperature: 25°C)

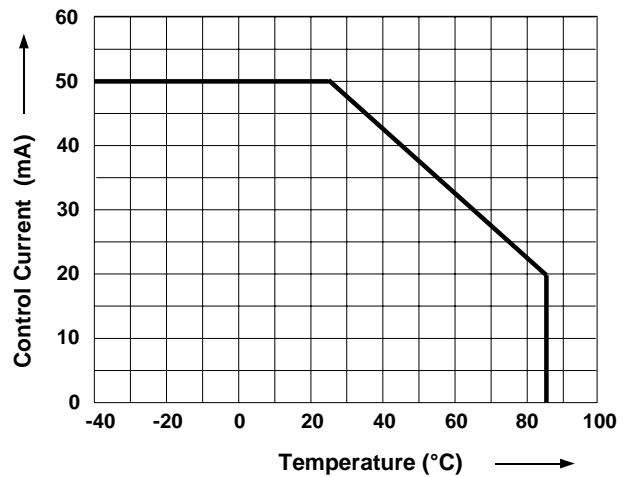
ITEM			Symbol	MIN.	TYP	MAX	UNIT	NOTE
Input	Forward voltage		V _F	1.0		1.4	V	I _F =10mA
	Reverse voltage		V _R			5	V	I _R =10μA
	Control current		I _{Fopr}	5		50	mA	
Output	Load voltage (DC)		V _L	200			V	
	Continuous Rated Load Current	PIN 7-8	SOP	I _L		80	mA	I _F =0mA
			DIP/SMD			100		
		PIN 5-6	SOP	I _L		150	mA	I _F =10mA
			DIP/SMD			200		
	Peak current	PIN 7-8	SOP	I _{Lpeak}		200	mA	10ms
			DIP/SMD			250		
		PIN 5-6	SOP	I _{Lpeak}		300	mA	10ms
			DIP/SMD			400		
	On-state resistance	PIN 7-8	R _{ON}			12	Ohm	I _F =0mA, I _L =rating
						PIN 5-6		
	Off-state Leakage current	PIN 7-8	I _{LK}			10	μA	I _F =5mA, V _L =rating
						PIN 5-6		
Turn-On Time	PIN 7-8	T _{ON}			0.03	ms	I _F =10mA V _L =rating, I _L =rating	
					PIN 5-6			0.2
Turn-Off Time	PIN 7-8	T _{OFF}			0.4	ms		
					PIN 5-6			0.03
Output Capacitance	PIN 7-8	C _{OUT}			-	pF	f=1MHz	
					PIN 5-6			-
Input/ Output	I/O Capacitance		C _{I/O}		1		pF	f=1MHz
	I/O Isolation voltage	SOP	V _{I/O}	1500		VAC	R.H. ≤ 60% 1min	
		DIP/SMD		3750				
I/O Isolation resistance		R _{I/O}	5			GΩ	DC=500V delay 2sec	
Temperature limits	Operating		T _{OP}	-40°C to +85°C (-40°F to +185°F)				
	Storage		T _{STG}	-40°C to +100°C (-40°F to +212°F)				

LIMIT CONDITIONS

Load Current vs. Temperature



Control Current vs. Temperature



RECOMMENDED OPERATING CONDITIONS

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward Current	I _F	5	10	25	mA
Operating Temperature	T _{opr}	-20		65	°C

5. PACKING

5.1 PACKING METHOD

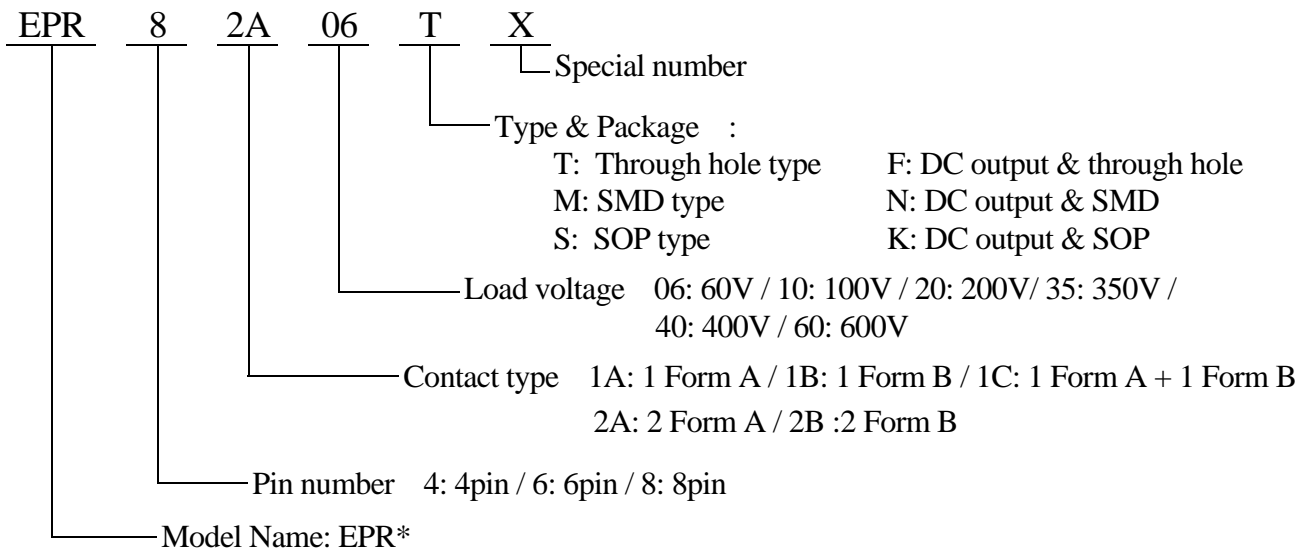
All relays are packed into IC tubes as an inner packing unit, and ten IC tubes bundled together with rubber bands.

5.2 Relays may also be packed using tape & reel methods.

5.3 INFORMATION ON LABEL (stuck to each bundle of IC tubes).

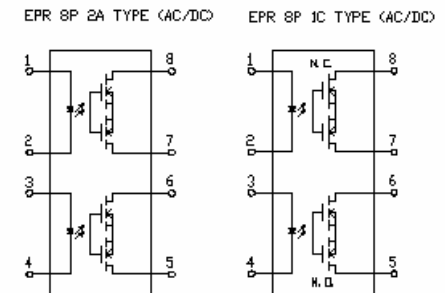
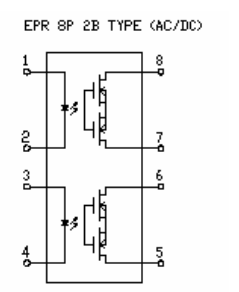
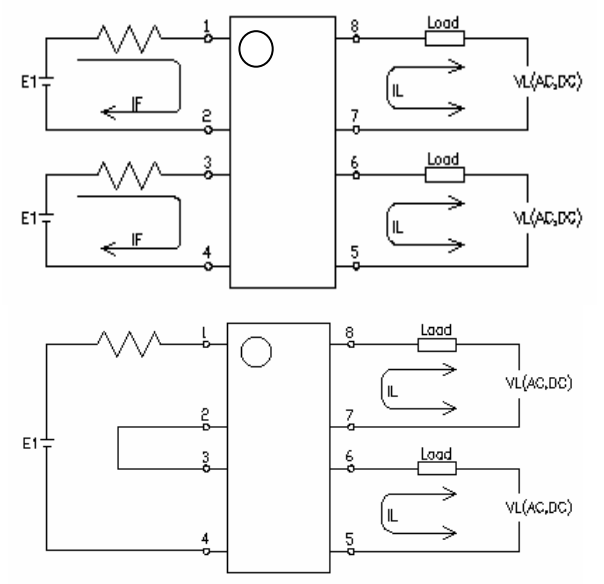
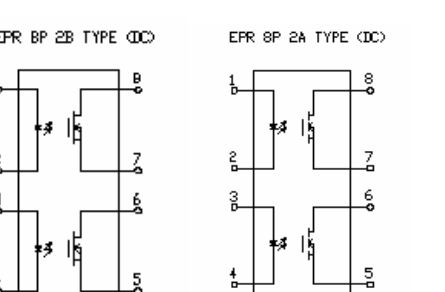
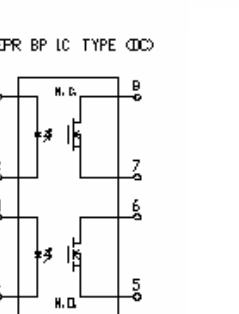
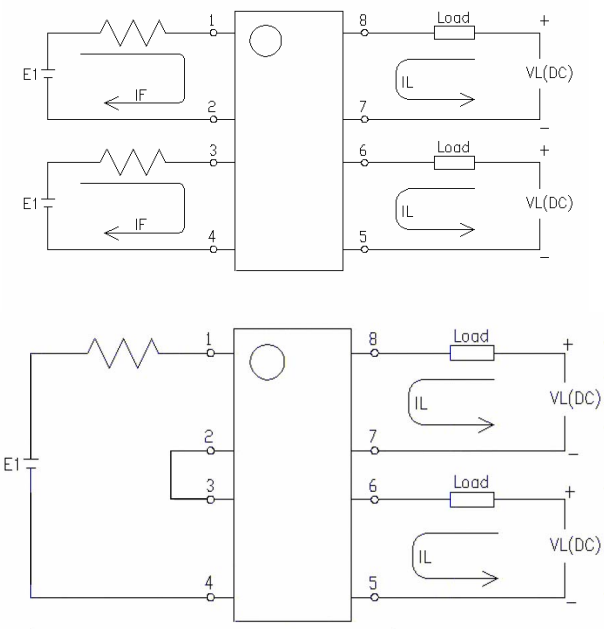
- | | |
|-----------------|--------------|
| (1) DESCRIPTION | (5) ECE MARK |
| (2) LOT NO. | (6) QC STAMP |
| (3) QUANTITY. | (7) DATE. |
| (4) TESTER NO. | |

6. MARKING SYSTEM



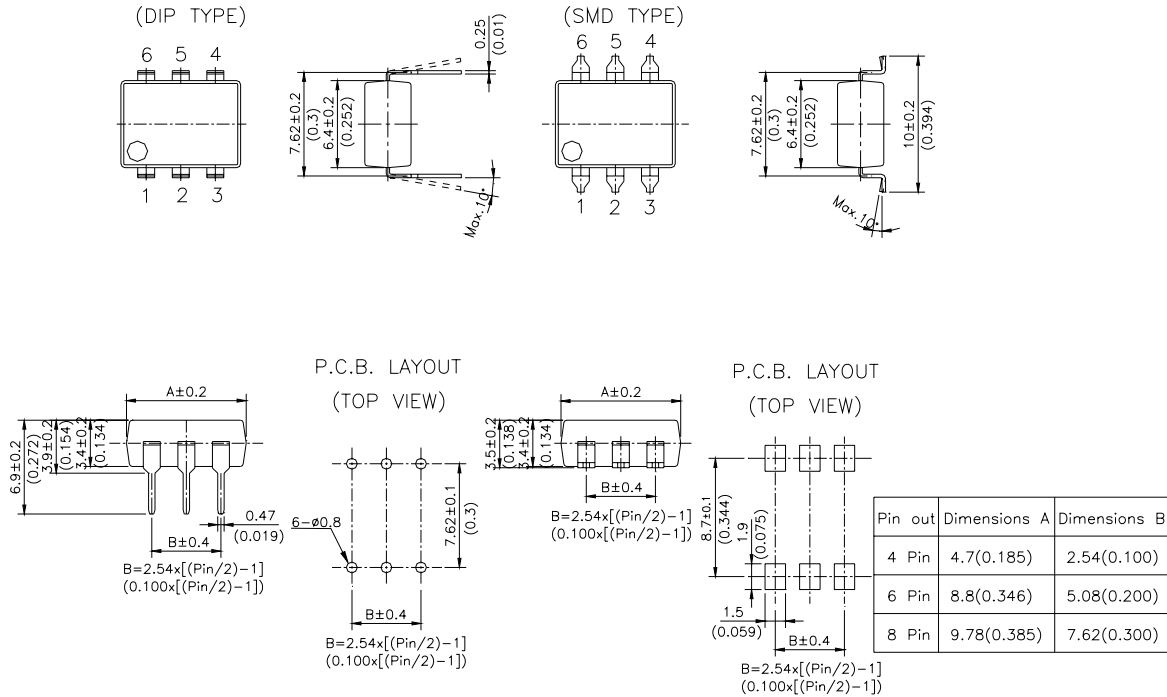
* 4 pin products without "EPR" mark.

7. CIRCUIT DIAGRAM & APPLICATION

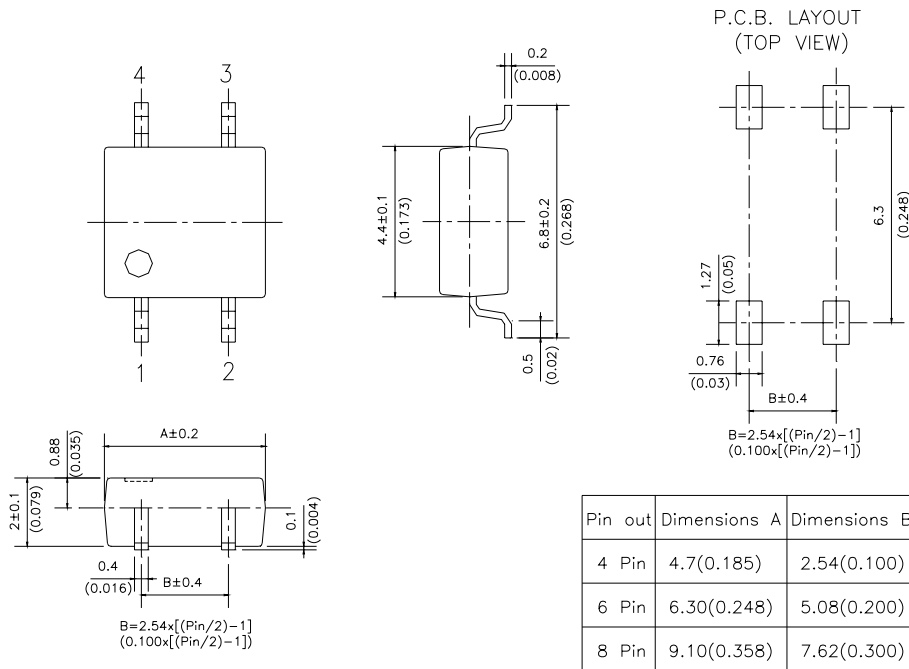
Circuit diagram (8 PIN)	Load type	Application
<p>EPR 8P 2A TYPE (AC/DC) EPR 8P 1C TYPE (AC/DC)</p>  <p>EPR 8P 2B TYPE (AC/DC)</p> 	<p>AC&DC</p>	
<p>EPR 8P 2B TYPE (DC) EPR 8P 2A TYPE (DC)</p>  <p>EPR 8P 1C TYPE (DC)</p> 	<p>DC</p>	

8. DRAWINGS

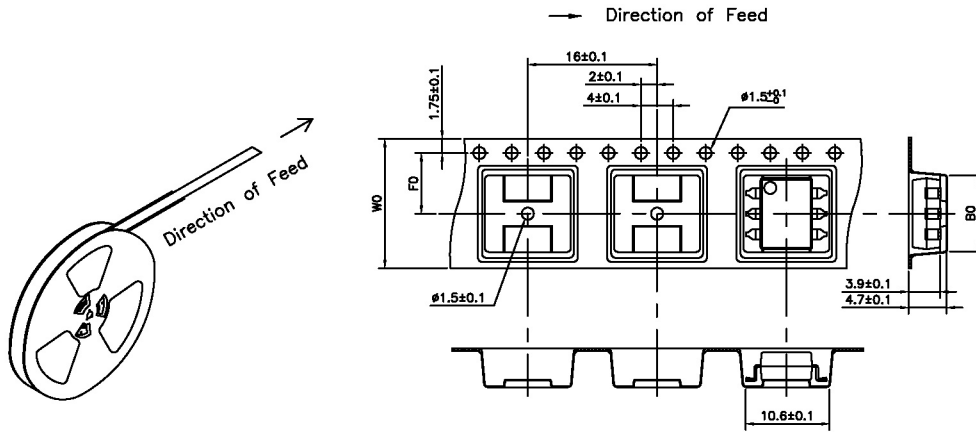
EPR/EPC/EPT/EPV-DIP/SMD SERIES DIMENSIONS Unit:mm(inch)



EPR/EPC/EPT/EPV-SOP SERIES DIMENSIONS Unit:mm(inch)

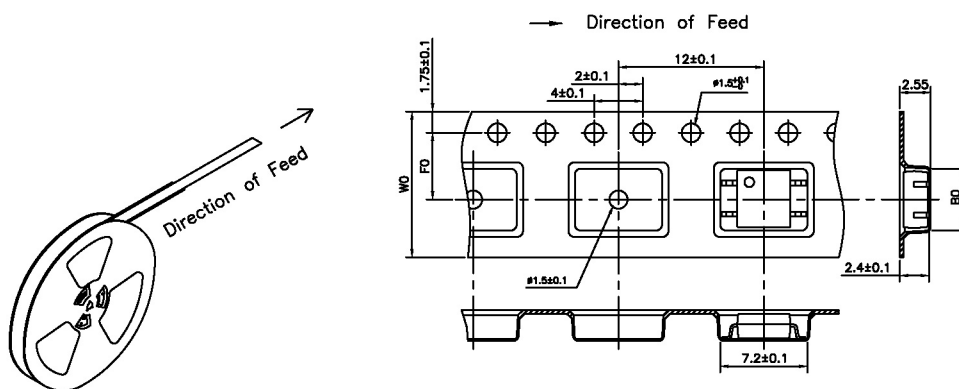


EPR-SMD REEL (Dimensions in mm)



TYPE	$B0 \pm 0.1$	$FO \pm 0.1$	$W0 \pm 0.3$	15" REEL/PCS
4P	5.3	7.5	16	1000
6P	9.4	7.5	16	1000
8P	10.3	11.5	24	1000

EPR-SOP REEL (Dimensions in mm)



TYPE	$B0 \pm 0.1$	$FO \pm 0.1$	$W0 \pm 0.3$	13" REEL/PCS
4P	5.1	5.5	12	2000
6P	6.7	7.5	16	2000
8P	9.6	7.5	16	2000