Features

- Halogen Free. “Green” Device (Note 1)
- Super Fast Recovery Times For High Effieciency
- Glass Passivated Chip Junction
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

3 Amp Super Fast Recovery Rectifier 50 to 1000 Volts

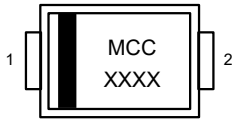
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value								Unit
		ER 3A	ER 3B	ER 3C	ER 3D	ER 3G	ER 3J	ER 3K	ER 3M	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	150	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}									
DC Blocking Voltage	V_R									
RMS Reverse Voltage	V_{RMS}	35	70	105	140	280	420	560	700	V
Average Rectified Forward Current @ T_L=125°C	$I_{F(AV)}$	3								A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	100								A
Current Squared Time @1ms≤t≤8.3ms	I^2t	41.5								A^2s

Marking Code

Part Number	Marking Code
ER3A	ER3A
ER3B	ER3B
ER3C	ER3C
ER3D	ER3D
ER3G	ER3G
ER3J	ER3J
ER3K	ER3K
ER3M	ER3M

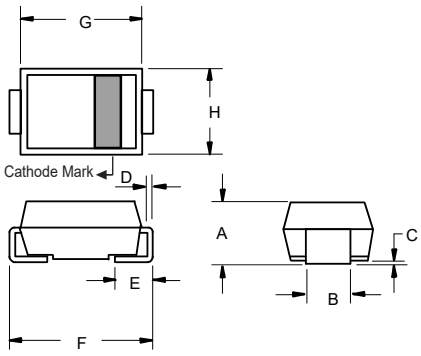
Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	 XXXX = Marking Code	
2	Anode		

Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

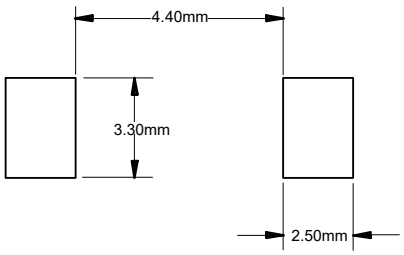
2. High temperature solder exemption applied, see EU directive annex 7a.

SMC (DO-214AB)



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.079	0.103	2.00	2.62	
B	0.108	0.128	2.75	3.25	
C	0.002	0.008	0.051	0.203	
D	0.006	0.012	0.152	0.305	
E	0.030	0.060	0.76	1.52	
F	0.305	0.320	7.75	8.13	
G	0.260	0.280	6.60	7.11	
H	0.220	0.245	5.59	6.22	

Suggested Solder Pad Layout



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		175	°C
T_{stg}	Storage Temperature Range		-55		175	°C
$Rth_{(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		13		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		65		°C/W

Note:
1.Mounted on P.C.B. with 16mm*16mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage ER3A~ER3D ER3G ER3J~ER3M	V_F	I_F=3A;T_J=25°C			0.95 1.25 1.70	V
Reverse Current	I_R	at Rated V_R;T_J=25°C at Rated V_R;T_J=125°C			5 200	μA
Reverse Recovery Time ER3A~ER3J ER3K~ER3M	t_{rr}	I_F=0.5A; I_R=1.0A; I_{rr}=0.25A;T_J=25°C			35 75	ns
Junction Capacitance ER3A~ER3D ER3G ER3J ER3K~ER3M	C_J	V_R=4V;f=1MHz;T_J=25°C		60 35 30 25		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

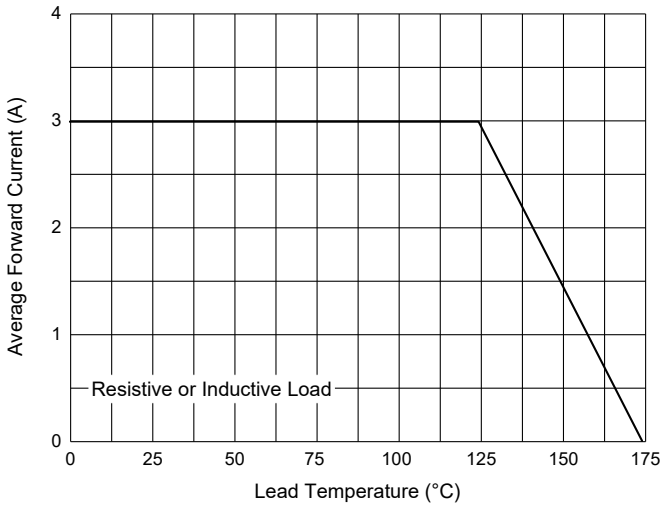


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

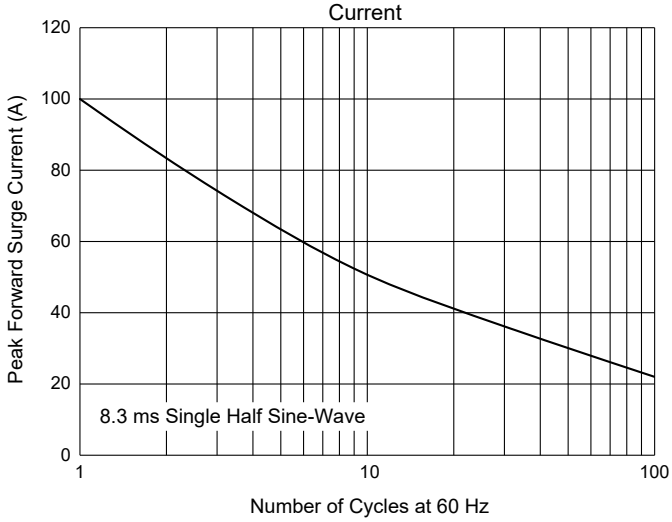


Fig. 3 - Typical Forward Characteristics

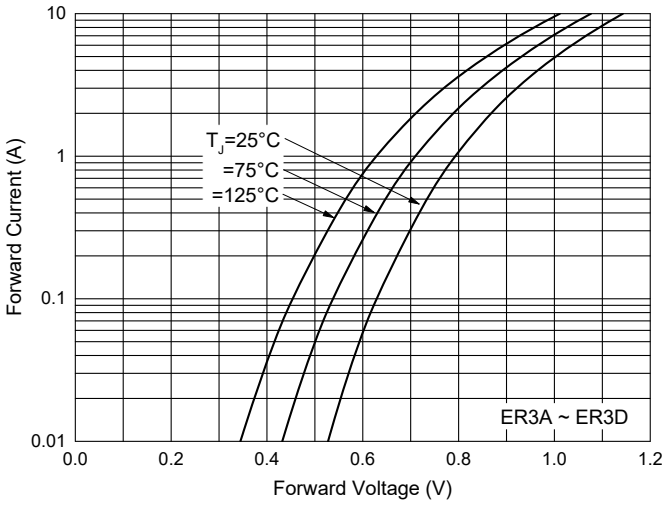


Fig. 4 - Typical Forward Characteristics

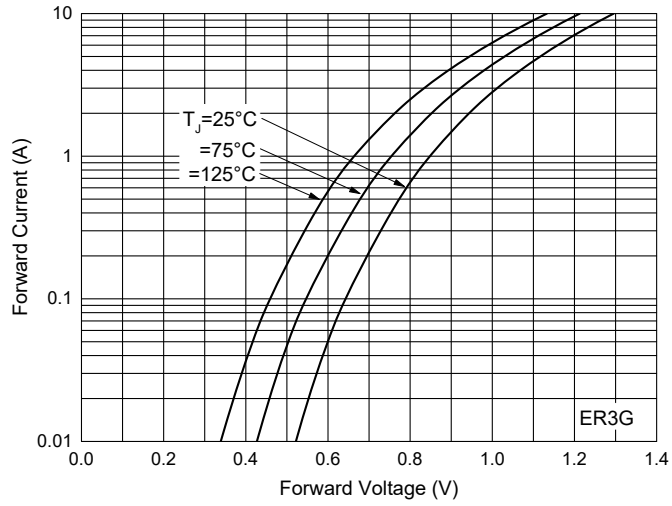


Fig. 5 - Typical Forward Characteristics

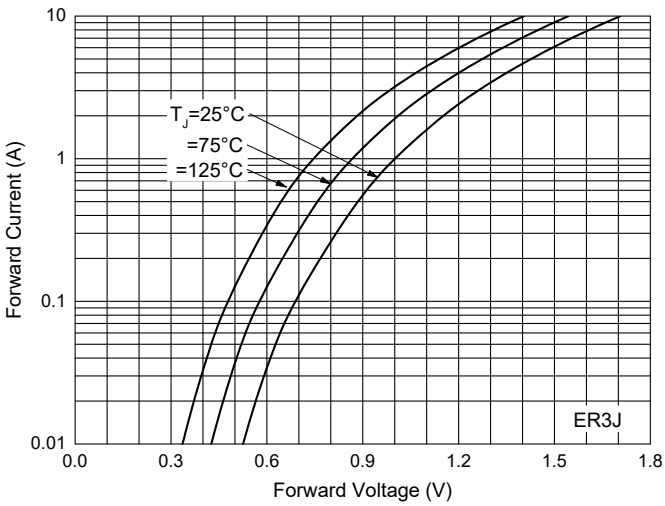
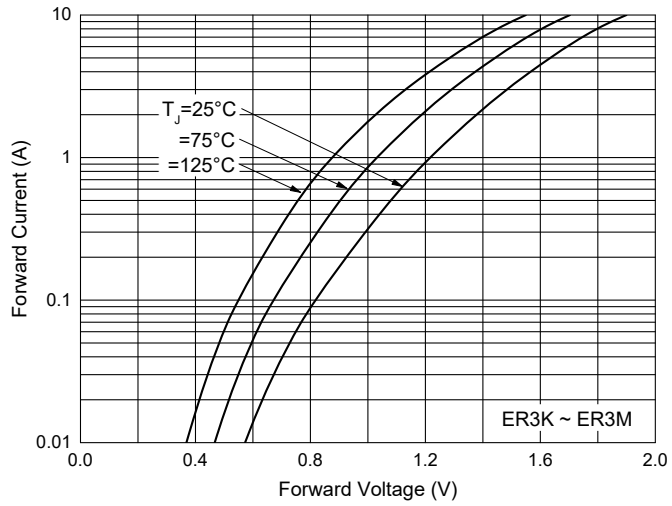


Fig. 6 - Typical Forward Characteristics



Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

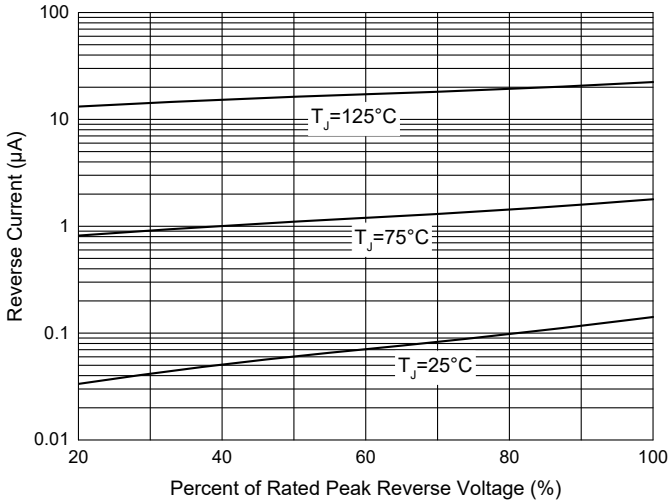
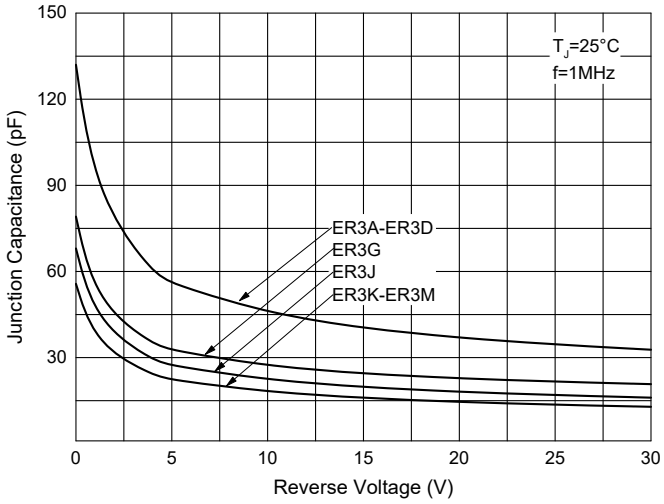


Fig. 8 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number -TP	Tape&Reel:3Kpcs/Reel

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