

FEATURES

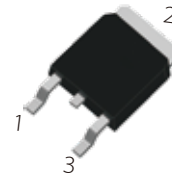
| The plastic package carries Underwriters Laboratory

| Flammability Classification 94V-0

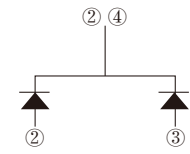
| Construction utilizes void-free molded plastic technique

| Low reverse leakage

| High forward surge current capability



TO-252



Schematic Symbol

MECHANICAL DATA

| Case : Molded plastic body

| Polarity : Polarity symbol marking on body

| Mounting Position : Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	ER605CS	ER610CS	ER620CS	ER640CS	ER650CS	ER660CS	Unit
Marking		ER605CS	ER610CS	ER620CS	ER640CS	ER650CS	ER660CS	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	500	600	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	350	420	
Maximum DC blocking voltage	V _{DC}	50	100	200	400	500	600	
Maximum average forward rectified current at T _C =110°C	per device	6.0						A
	per diode	3.0						
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	60.0						A
Maximum instantaneous forward voltage at 3.0A	V _F	1.0		1.3	1.7		V	
Maximum DC reverse current at rated DC blocking voltage	T _A =25°C	5						uA
	T _A =125°C	200						
Maximum reverse recovery time	T _{rr}	35						ns
Typical thermal resistance	R _{θJC}	15.0						°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150						°C

Note 1. Reverse recovery time test condition: I_F=0.5A I_R=1.0A I_{rr}=0.25A

CHARACTERISTIC CURVES

Fig. 1- Derating Curve Output Rectified Current

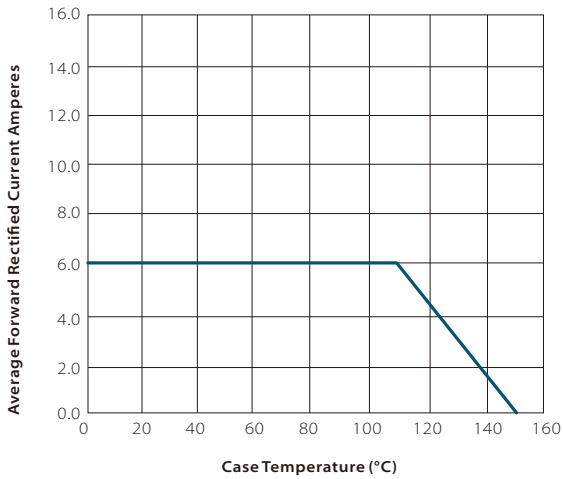


Fig. 2-Maximum Non-repetitive Peak Forward Surge Current Perleg

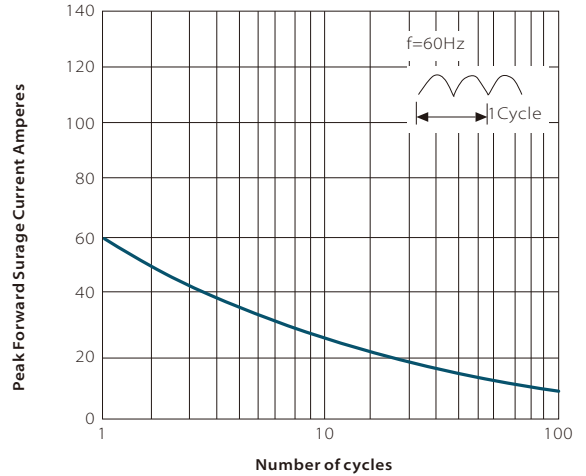


Fig. 3-Typical Forward Voltage Characteristics

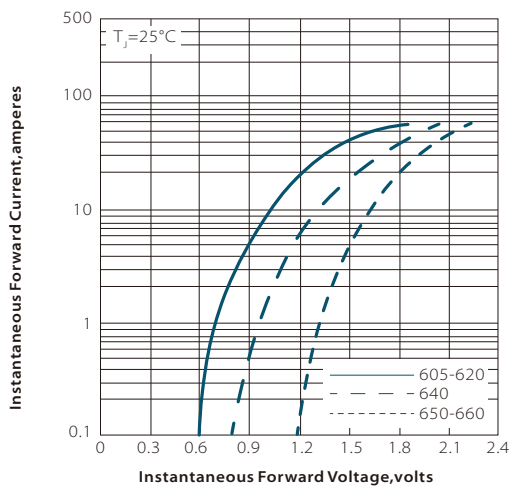
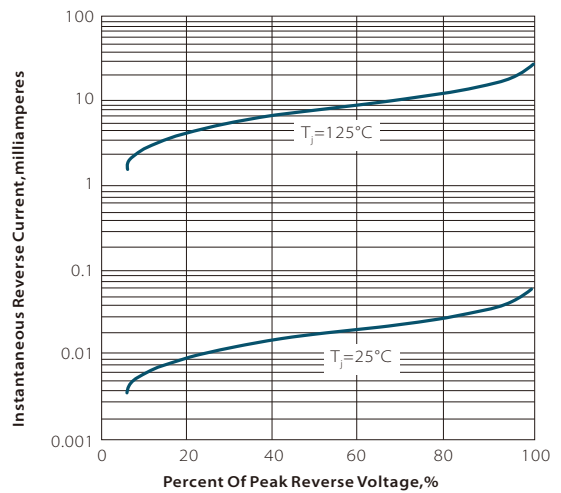
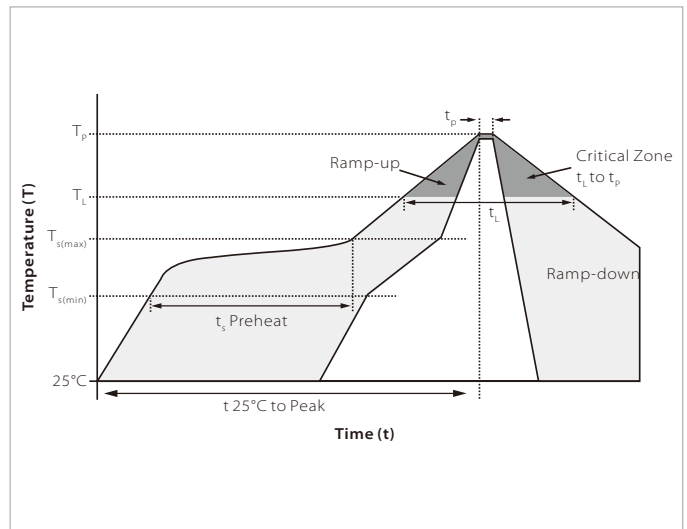


Fig. 4-Typical Reverse Leakage Characteristics

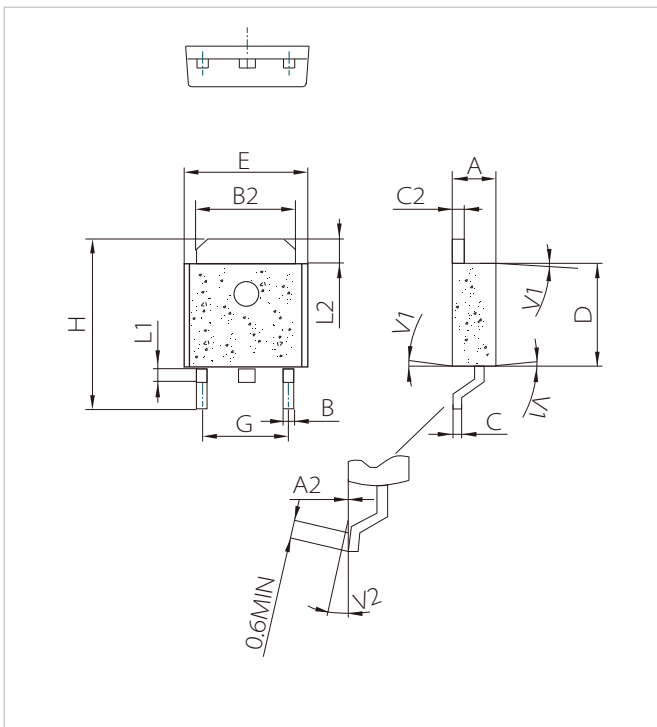


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C



TO-252 PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.20		2.40	0.086		0.095
A2	0.03		0.23	0.001		0.009
B	0.55		0.65	0.022		0.026
B2	5.10		5.40	0.200		0.213
C	0.45		0.62	0.018		0.024
C2	0.48		0.62	0.019		0.024
D	6.00		6.20	0.236		0.244
E	6.40		6.70	0.252		0.264
G	4.40		4.70	0.173	0.1	0.185
H	9.35		10.6	0.368		0.417
L1	1.30		1.70	0.051	0.143	0.067
L2	1.37		1.50	0.054		0.059
L1		4°			0.130	
V2	0°		8°	0°		8°

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
ER605CS-ER660CS	TO-252	2500PCS	13"

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