

RoHS Compliant Product
 A suffix of "-C" specifies halogen free

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Halogen-free type
- Lead free product , compliance to RoHS
- Lead less chip form , no lead damage
- Lead-free solder joint , no wire bond & lead frame
- Low power loss , High efficiency
- High current capability , low V_F

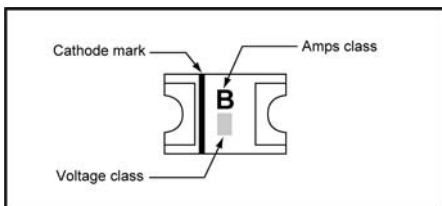
APPLICATION

- Switching mode power supply applications
- Portable equipment battery applications
- High frequency rectification
- DC / DC Converter
- Telecommunication

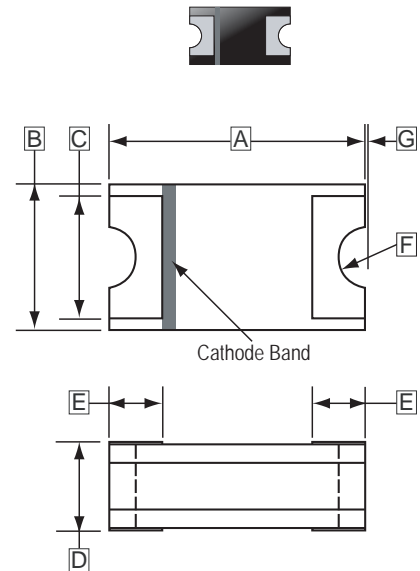
MECHANICAL DATA

- Case : Packed with FRP substrate and epoxy underfilled
- Terminals : Pure Tin plated (Lead-Free), solderable per MIL-STD-750 , Method 2026.
- Polarity : Laser Cathode band marking
- Weight: 0.005 grams (approximate)

MARKING



0805



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.90	2.10	E	0.40	0.60
B	1.20	1.40	F	R 0.275	
C	1.00 TYP.		G	0.05 REF.	
D	0.85	1.05			

PACKAGE INFORMATION

PACKAGE	MPQ	Carton Size
0805	3000	7 inch

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

TYPE NUMBER	SYMBOL	MSCD0	MSCD	MSCD	UNITS
		52	053	054	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	V
Maximum Average Forward Current	$I_{F(AV)}$	0.5			A
Peak Forward Surge Current @ 8.3 ms single half sine-wave	I_{FSM}	5			A
Operating Temperature range	T_{opr}	-40 ~ +125			$^\circ\text{C}$
Junction Temperature Range T_J	T_J	125			$^\circ\text{C}$
Storage Temperature Range T_{STG}	T_{STG}	-40 ~ +125			$^\circ\text{C}$

TYPE NUMBER			SYMBOL	Min.	Typ.	Max.	UNITS
Forward Voltage	MSCD052	$I_F=0.1A$	V_F	-	0.32	-	V
		$I_F=0.5A$		-	0.40	0.44	
	MSCD053	$I_F=0.1A$		-	0.32	-	
		$I_F=0.5A$		-	0.40	0.46	
	MSCD054	$I_F=0.1A$		-	0.32	-	
		$I_F=0.5A$		-	0.40	0.48	
Repetitive peak reverse current @ $V_R= \text{Max. } V_{RRM}, T_A=25^\circ\text{C}$			I_{RRM}	-	15	100	μA
Junction capacitance @ $V_R= 4V, f= 1.0 \text{ MHz}$			C_J	-	28	-	pF
Typical Thermal Resistance Junction to ambient			$R_{\theta JA}$	-	120	-	$^\circ\text{C} / \text{W}$
Typical Thermal Resistance Junction to lead			$R_{\theta JL}$	-	28	-	$^\circ\text{C} / \text{W}$

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

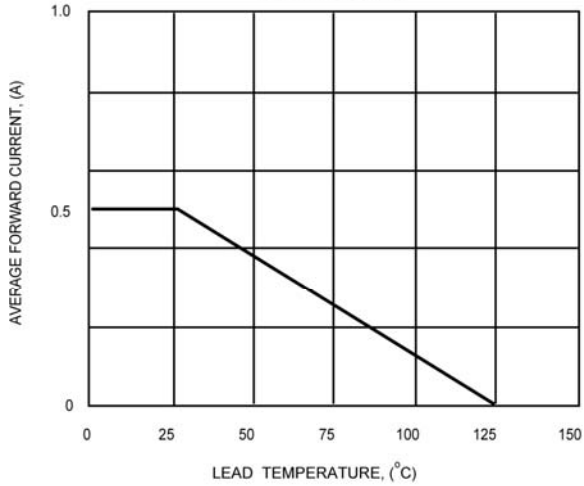


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

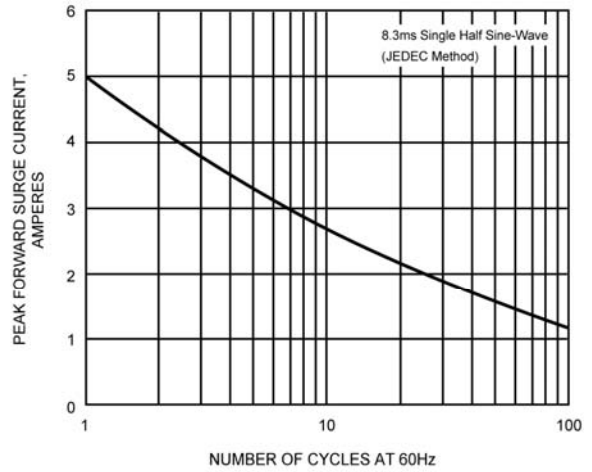


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

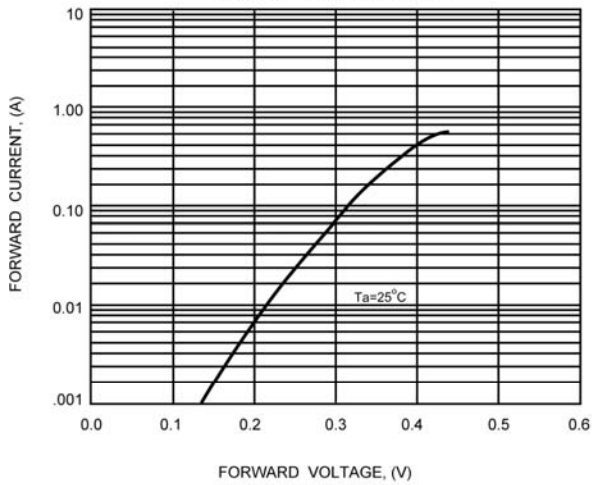


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

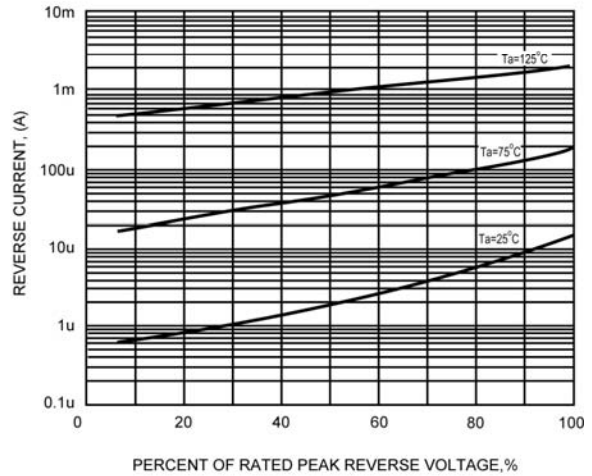


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

