Elektronische Bauelemente

MSCD052-C~MSCD054-C

Voltage 20V~40V

0.5Amp Surface Mount Schottky Barrier Rectifiers

RoHS Compliant Product

A suffix of "-C" specifies halogen free

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low Power Loss, High Efficiency
- High Current Capability, low V_F

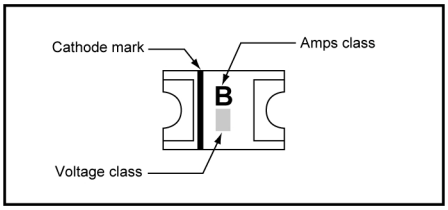
APPLICATION

- Switching Mode Power Supply Applications
- Portable Equipment Battery Applications
- High Frequency Rectification
- DC/DC Converter
- Telecommunication

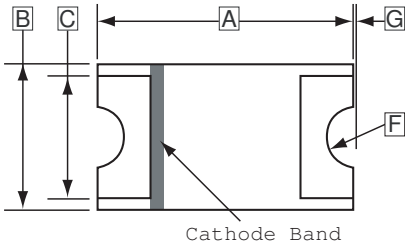
MECHANICAL DATA

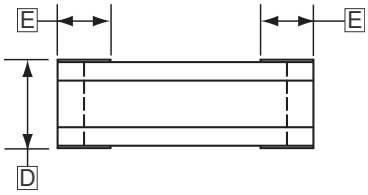
- Case: Packed with FRP substrate and epoxy underfilled
- Terminals: Pure Tin plated (Lead-Free), solderable per MIL-STD-750, Method 2026.
- Polarity: Laser Cathode band marking

MARKING

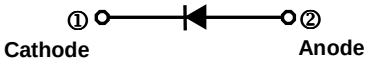


0805





REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.90	2.10	E	0.35	0.60
B	1.20	1.40	F	R 0.275	
C	1.00 TYP.		G	0.05 REF.	
D	0.7	1.05			



PACKAGE INFORMATION

Package	MPQ	Leader Size
0805	3K	7 inch

ORDER INFORMATION

Part Number	Type
MSCD052-C~MSCD054-C	Lead (Pb)-free and Halogen-free

ABSOLUTE MAXIMUM RATINGS (T_A=25℃ unless otherwise specified)

Parameter	Symbol	Part Number			Unit
		MSCD052-C	MSCD053-C	MSCD054-C	
Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	V
Average Forward Current	$I_{F(AV)}$	0.5			A
Peak Forward Surge Current @8.3ms Single Half Sine-Wave	I_{FSM}	5			A
Operating Temperature Range	T_{opr}	-40~125			℃
Junction Temperature Range	T_J	125			℃
Storage Temperature Range	T_{STG}	-40~125			℃

ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise specified)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Forward Voltage	MSCD052-C	V_F	-	0.32	-	V	I_F=0.1A
			-	0.40	0.44		I_F=0.5A
	MSCD053-C		-	0.32	-		I_F=0.1A
			-	0.40	0.46		I_F=0.5A
	MSCD054-C		-	0.32	-		I_F=0.1A
			-	0.40	0.48		I_F=0.5A
Repetitive Peak Reverse Current		I_{RRM}	-	15	100	μA	V_R=Max. V_{RRM}, T_A=25℃
Junction Capacitance		C_J	-	28	-	pF	V_R=4V, f=1MHz
Typical Thermal Resistance Junction-Ambient		$R_{\theta JA}$	-	120	-	℃/W	
Typical Thermal Resistance Junction-Lead		$R_{\theta JL}$	-	28	-	℃/W	

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RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

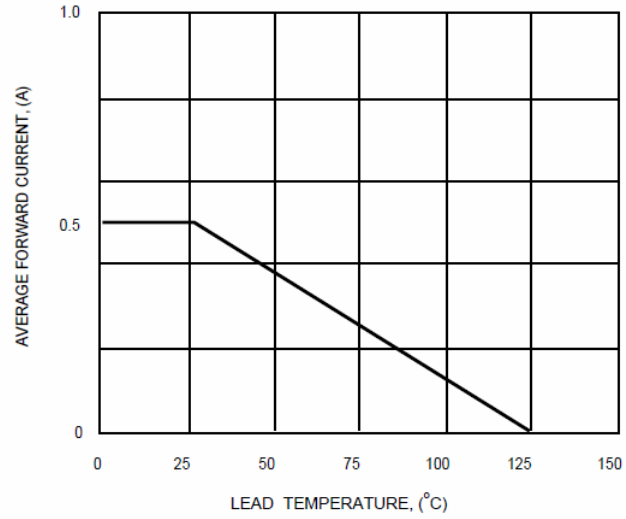

FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

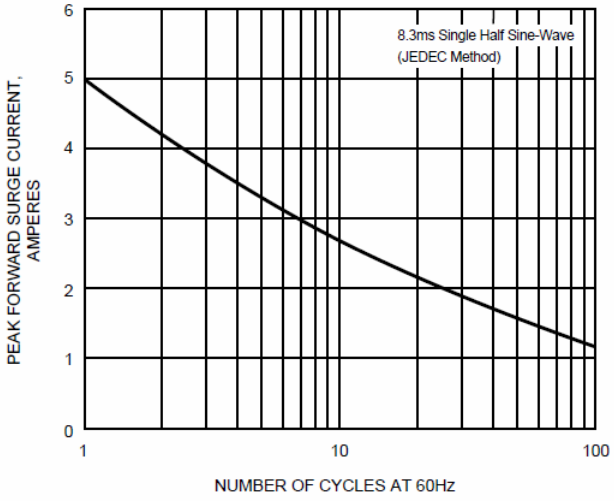

FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

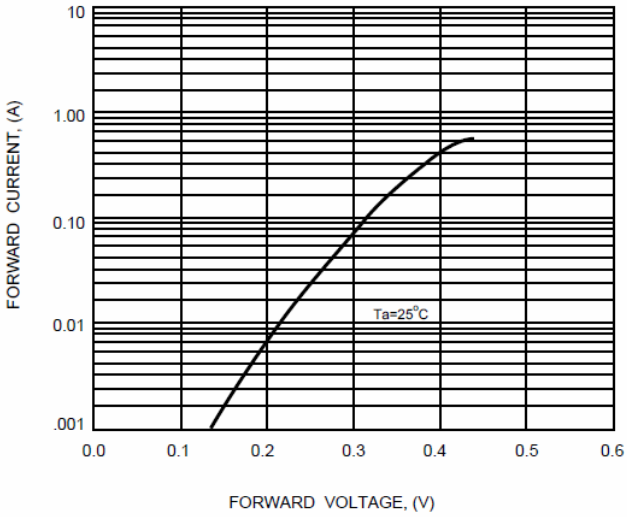

FIG.4 - TYPICAL REVERSE CHARACTERISTICS

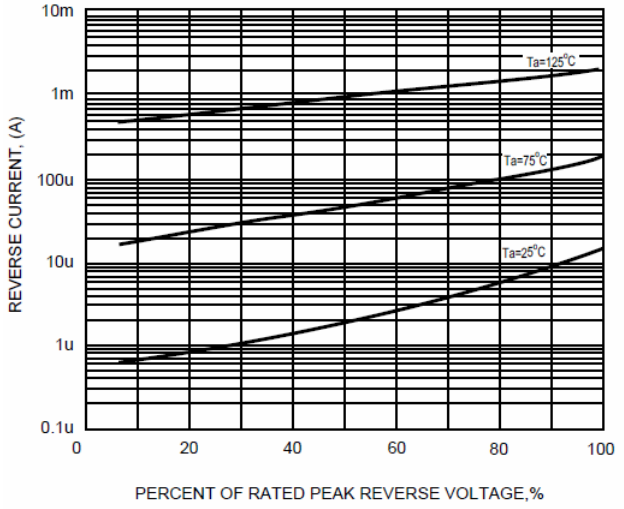

FIG. 5 - TYPICAL JUNCTION CAPACITANCE