Elektronische Bauelemente

MB405 ~ MB407

VOLTAGE 600 V ~ 1000 V, 4.0 A

Glass Passivated Bridge Rectifiers Diodes

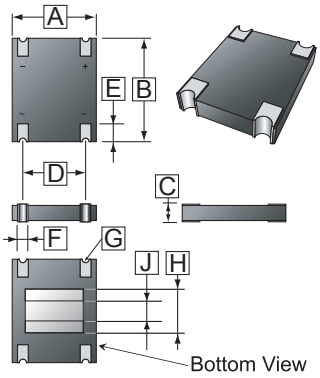
RoHS compliant product

A suffix of "-C" specifies halogen & lead-free

FEATURES

- Halogen-free type
- Internal structure with GPRC (glass passivated rectifier chip) inside
- 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
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

Case: MBCS



APPLICATION

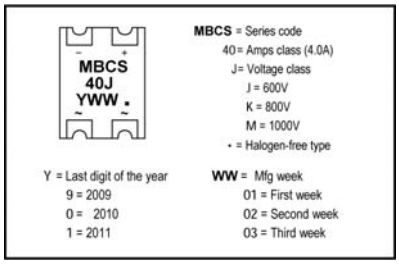
- AC/DC power supply
- Communication Equipment

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 marking symbols
- Weight: 0.29 grams

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	8.00	8.20	F	1.05	1.35
B	10.40	10.60	G	R 0.40	
C	0.95	1.25	H	4.00 REF.	
D	5.00 REF.		J	2.00 REF.	
E	1.13	1.43			

MARKING



ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	MB405	MB406	MB407	UNIT
Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	V
Average Forward Current	$I_{F(AV)}$	4.0			A
Peak Forward Surge Current 8.3ms Single half Sine-wave	I_{FSM}	150			A
Operating & Storage Temperature Range	T_J, T_{STG}	-55~175			°C

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Forward Voltage	V_F	-	0.86	0.9	V	I_F=2.0A
		-	0.9	0.95	V	I_F=4.0A
Repetitive Peak Reverse Current	I_{RRM}	-	0.08	5	μA	V_R=Max. V_{RRM}
Current Squared Time	I^2t	-	93.38	-	A^2s	t < 8.3ms
Junction Capacitance	C_J	-	45	-	pF	V_R=4V, f=1.0MHz
Thermal Resistance	$R_{\theta JA}$	-	110	-	°C/W	Junction to Ambient (Note)
	$R_{\theta JL}$	-	15	-		Junction to Lead (Note)

Note: Thermal resistance, junction to ambient, measured on PC board with 5.0mm^2 (0.03mm thick) land areas.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

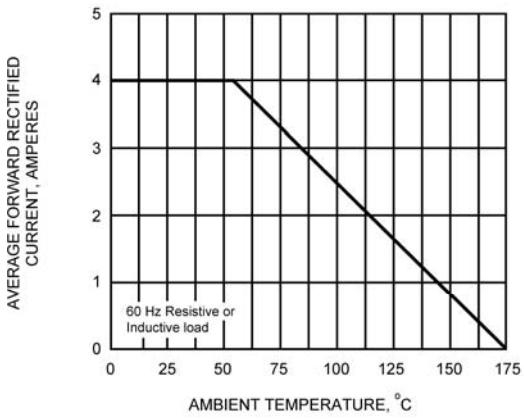

FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

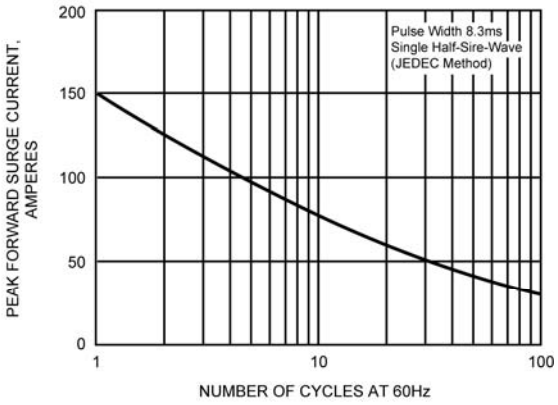

FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

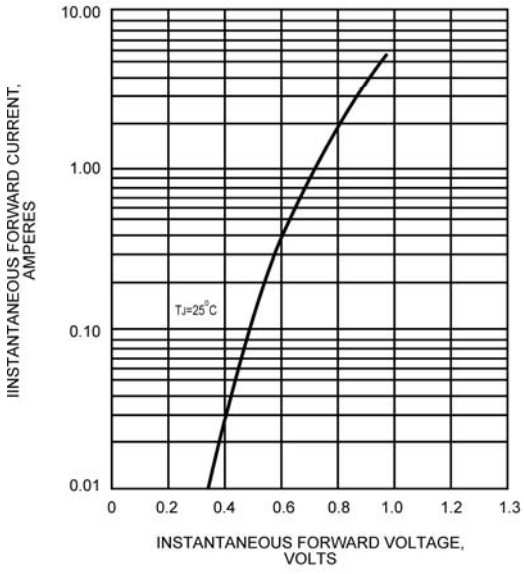

FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

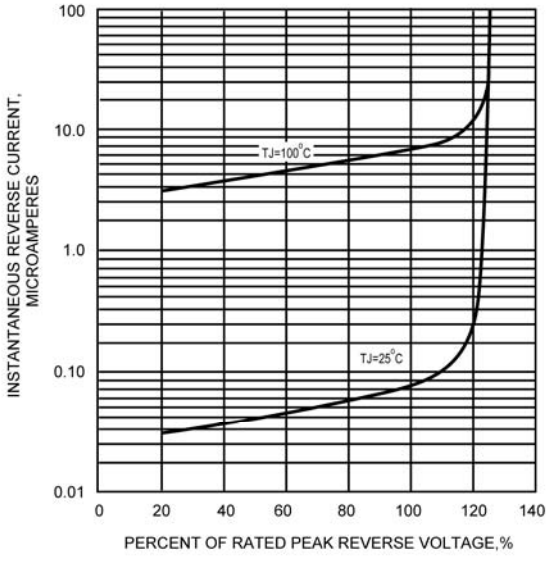

FIG.5 - TYPICAL JUNCTION CAPACITANCE