

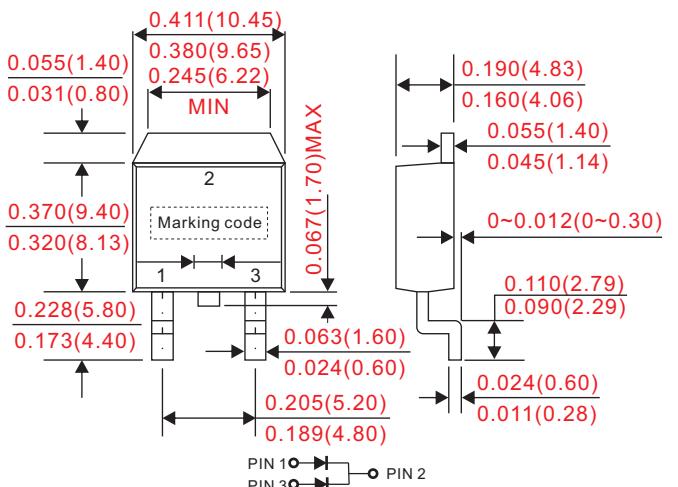
■ Features

- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- Suffix "C" indicates Halogen-free part, ex.MBRB1040CTG.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

■ Mechanical data

- Epoxy : UL94-V0 rated flame retardant.
- Case : Molded plastic, TO-263 / D²PAK
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight : Approximated 1.70 gram.

■ Outline

D²PAK(TO-263)

Dimensions in inches and (millimeters)

■ Maximum ratings and electrical characteristics

Rating at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I _O			10	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I _{FSM}			125	A
Reverse current	V _R = V _{RRM} T _A = 25°C	I _R	0.1	10	mA	
	V _R = V _{RRM} T _A = 125°C					
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C _J		150		pF
Thermal resistance	Junction to ambient	R _{θJA}		30		°C/W
Storage temperature		T _{STG}	-55		+175	°C

Symbol	Marking code	Max. repetitive peak reverse voltage V _{RRM} (V)	Max. RMS voltage V _{RMS} (V)	Max. DC blocking voltage V _R (V)	Max. forward voltage @5A, T _A = 25°C V _F (V)	Max. forward voltage @5A, T _A = 125°C V _F (V)	Operating temperature T _J (°C)
MBRB1040CT	MBRB1040CT	40	28	40	0.70	0.57	-55 ~ +150
MBRB1045CT	MBRB1045CT	45	31.5	45			
MBRB1060CT	MBRB1060CT	60	42	60			
MBRB1065CT	MBRB1065CT	65	45.5	65			
MBRB10100CT	MBRB10100CT	100	70	100			
MBRB10150CT	MBRB10150CT	150	105	150			
MBRB10200CT	MBRB10200CT	200	140	200			

■ Rating and characteristic curves

Fig.1 - Forward Current Derating Curve

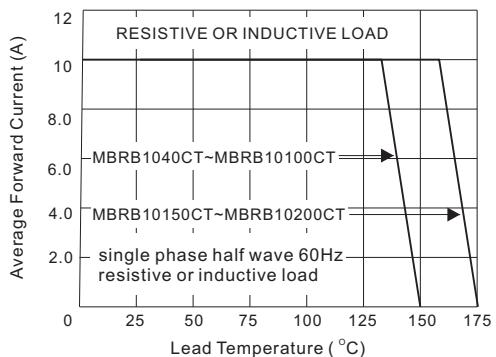


Fig. 3.1 - Typical Instantaneous Forward Characteristics

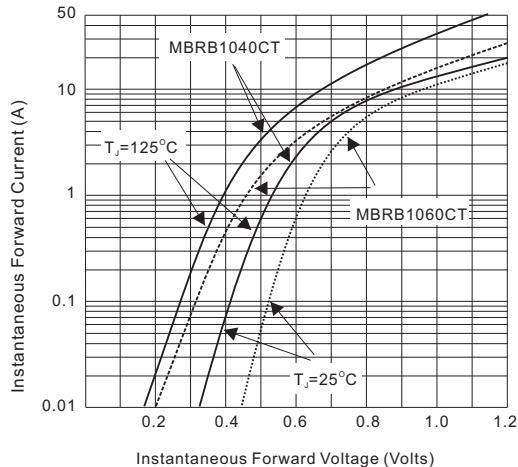


Fig. 3.3 - Typical Instantaneous Forward Characteristics

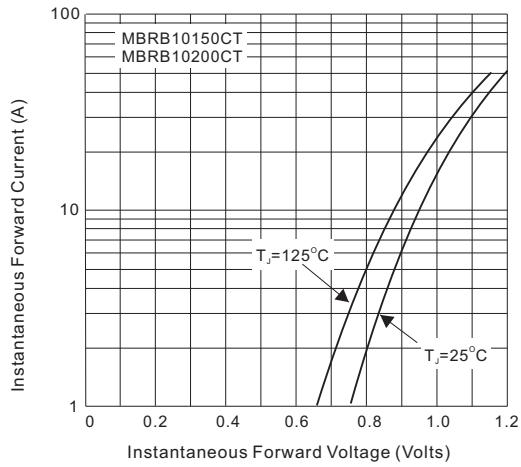


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

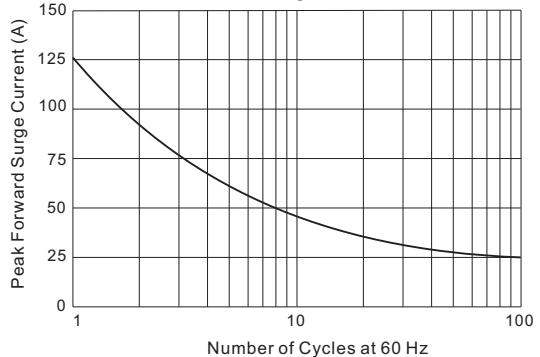


Fig. 3.2 - Typical Instantaneous Forward Characteristics

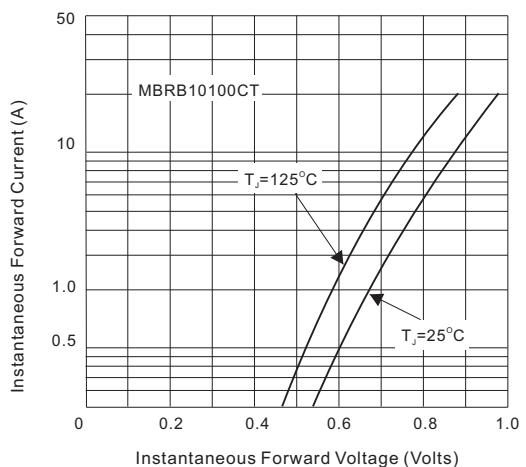
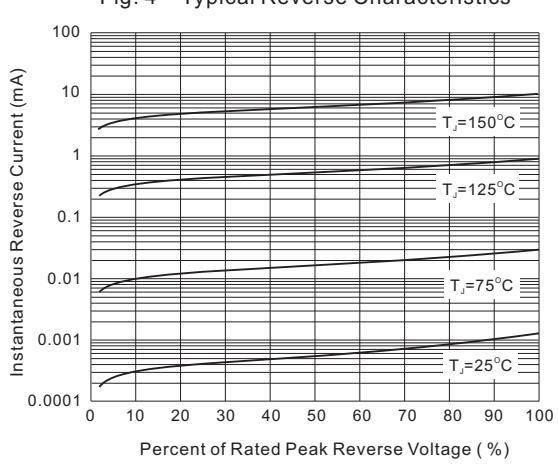
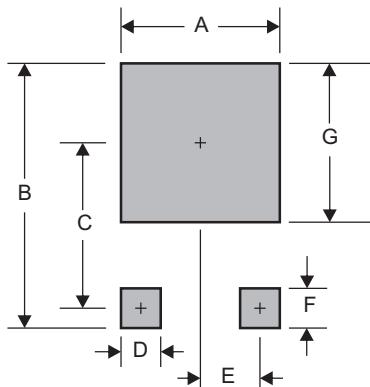


Fig. 4 - Typical Reverse Characteristics



■ D²PAK(TO-263) foot print

A	B	C	D	E	F	G
0.425 (10.80)	0.665 (16.90)	0.374 (9.50)	0.071 (1.80)	0.098 (2.50)	0.138 (3.50)	0.449 (11.40)

Dimensions in inches and (millimeters)

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