

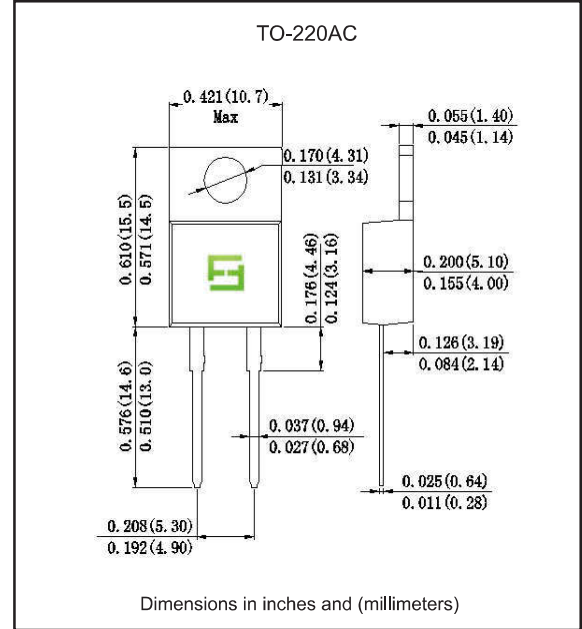
## Features

- Low power loss, high efficiency.
- High current capability
- High surge capability.
- Guardring for overvoltage protection.
- Low stored charge majority carrier conduction
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228

## Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, TO-220AC
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any

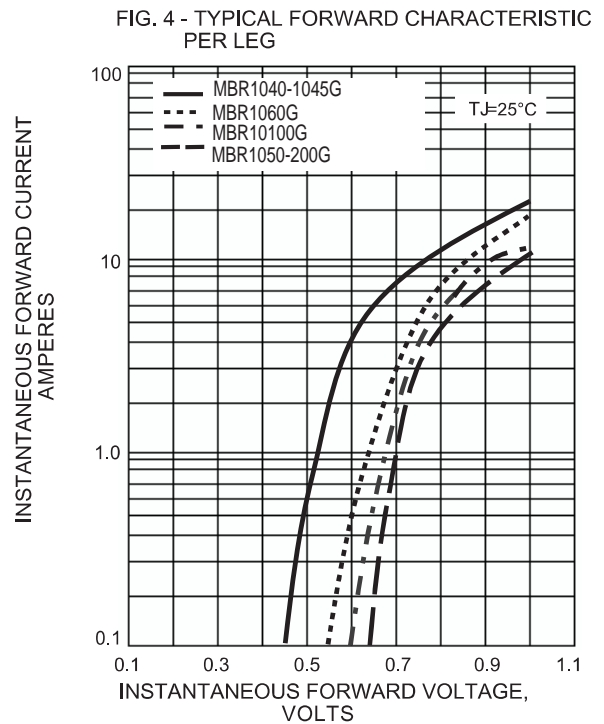
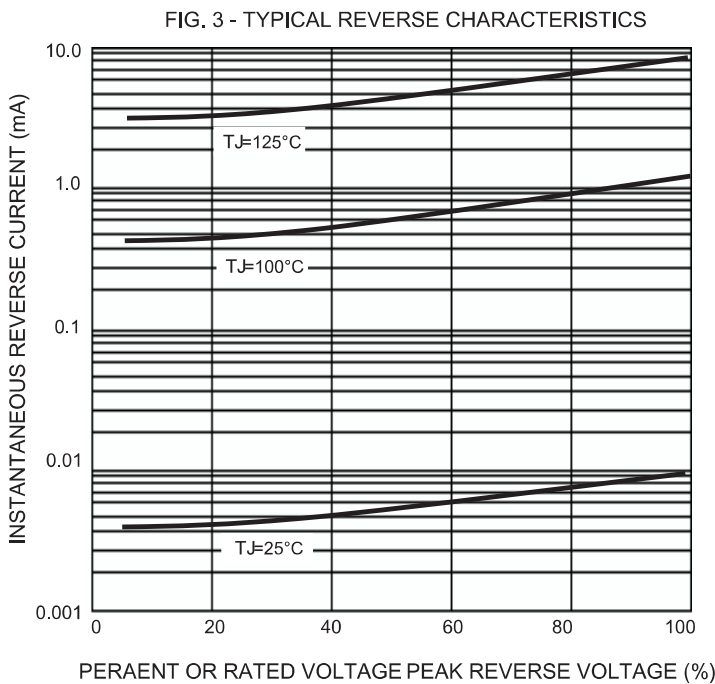
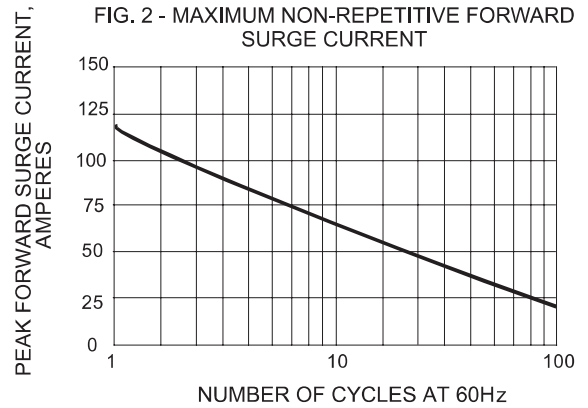
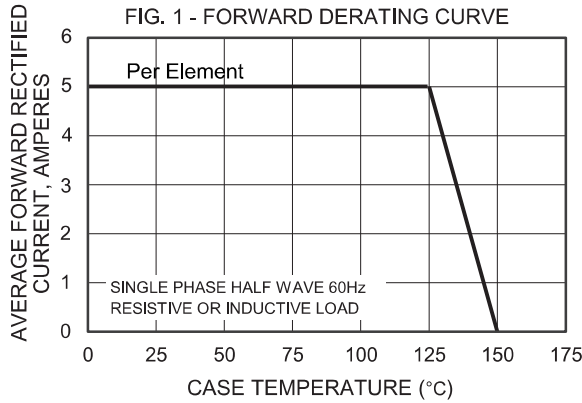
## Package outline



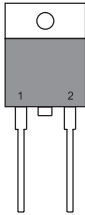
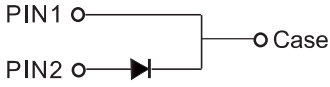
## Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	SYMBOLS	MBR 1040G	MBR 1045G	MBR 1060G	MBR 10100G	MBR 10150G	MBR 10200G	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	45	60	100	150	200	V
Maximum RMS voltage	$V_{RMS}$	28	31.5	42	70	105	140	V
Maximum DC blocking voltage	$V_{DC}$	40	45	60	100	150	200	V
Maximum average forward rectified current at $T_c=110^\circ\text{C}$	$I_{(AV)}$	10.0						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150.0						A
Maximum instantaneous forward voltage at 10.0A	$V_F$	0.55	0.70	0.85	0.95		V	
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	$I_R$	0.5 50			0.05 10		mA	
Typical thermal resistance	$R_{qJC}$	3.5						$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +150						$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150						$^\circ\text{C}$

## Rating and characteristic curves



### Pinning information

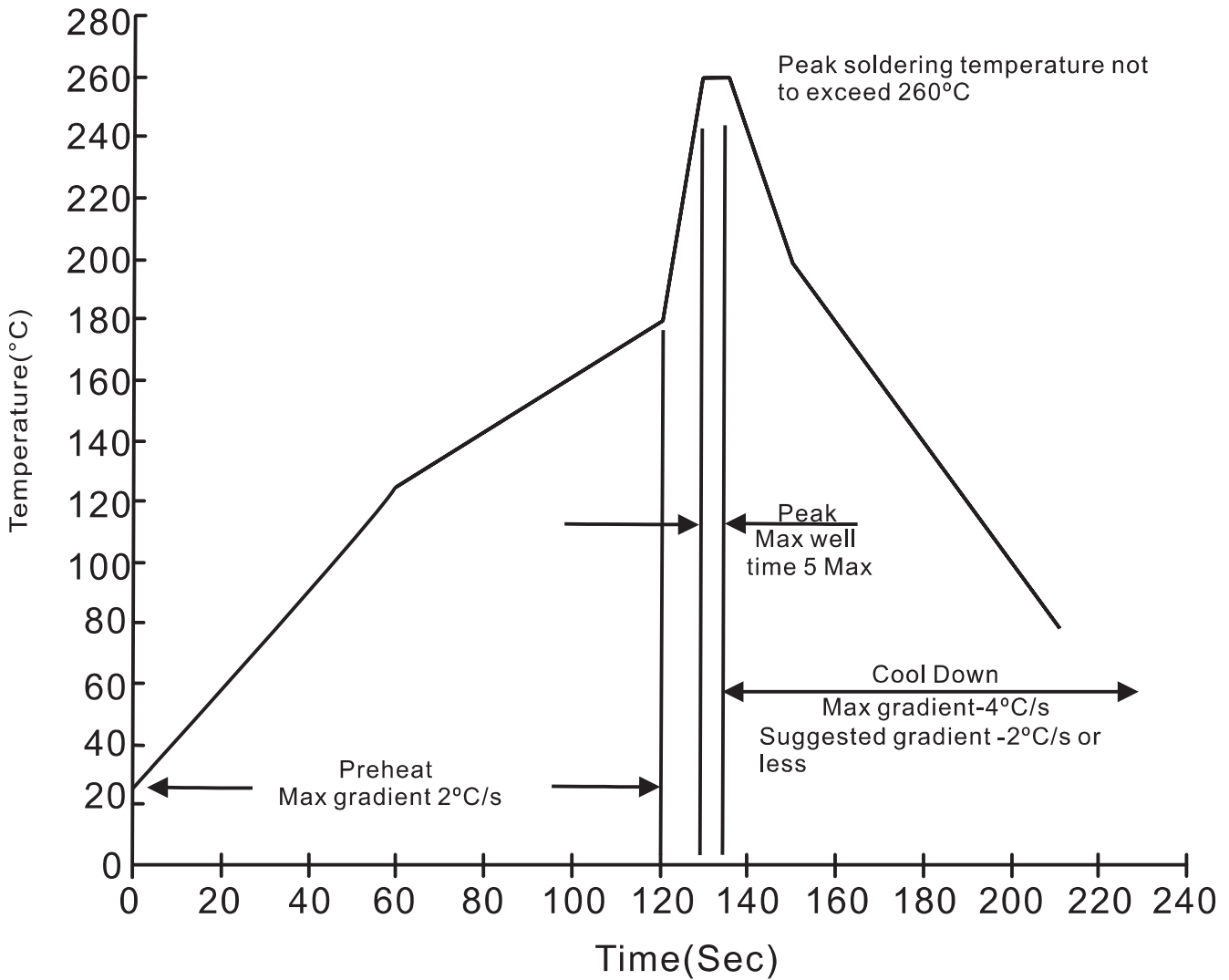
Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Marking

Type number	Marking code
MBR1040G	MBR1040
MBR1045G	MBR1045
MBR1050G	MBR1050
MBR1060G	MBR1060
MBR10100G	MBR10100
MBR10150G	MBR10150
MBR10200G	MBR10200

**Suggested thermal profiles for soldering processes**

1. Lead free temperature profile wave-soldering



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