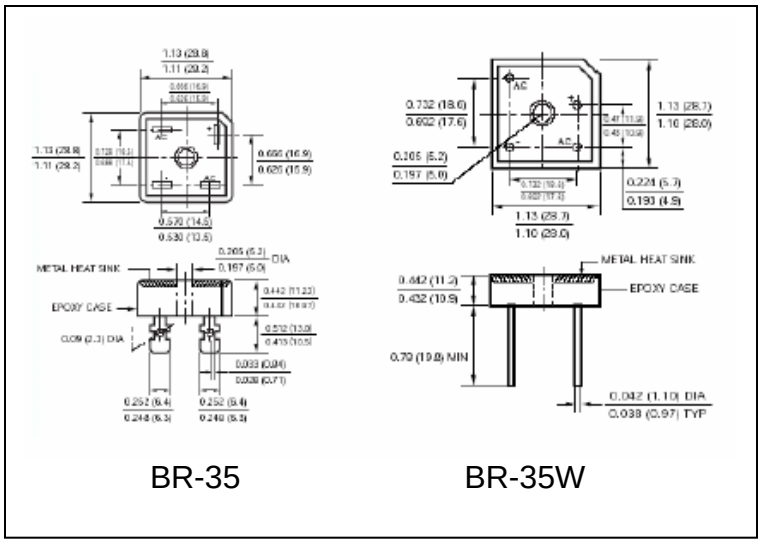
SINGLE PHASE BRIDGE RECTIFIER

BR2505 THRU BR2510

VOLTAGE RANGE **50 to 1000 Volts**
CURRENT **25.0 Ampere**

FEATURES

- UL recognized
- High forward surge current capability
- Integrally molded heatsink provides very low Thermal resistance
- High isolation voltage from case to lugs
- High temperature soldering guaranteed: 260^{O}C / 10 seconds
- Available in either lug package (BR2505) or wire lead package (BR2505W)



MECHANICAL DATA

- Case: Molded plastic body
- Terminal: Plated 0.25" (6.35mm) lug or Plated 0.040" (1.02mm) diameter lead
- Polarity: Polarity symbols marked on case
- Mounting: Thru hole for #10 screw, 20 in-lbs Torque max.
- Weight: 0.66 ounce, 18.7 gram – BR-35
  0.61 ounce, 17.4 gram – BR-35W

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25^{O}C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	BR 2505	BR 251	BR 252	BR 254	BR 256	BR 258	BR 2510	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, At T_C = 50^{O}C (Note 1 and 2)	$I_{(AV)}$	25							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	300							Amps
Rating for Fusing (t<8.3mS)	I^2t	373							A^2s
Maximum Instantaneous Forward Voltage drop per Bridge element 12.5A	V_F	1.1							Volts
Maximum DC Reverse Current at Rated T_A = 25 ^{O}C	I_R	10							µA
DC Blocking Voltage per element T_A = 100 ^{O}C		1.0							mA
Isolation Voltage from case to lug or leads	V_{ISO}	2500							Volts
Typical Thermal Resistance (Note 1 and 2)	$R_{\theta Jc}$	2.0							^{O}C/W
Operating Junction Temperature Range	T_J	(-65 to +150)							^{O}C
Storage Temperature Range	T_{STG}	(-65 to +150)							^{O}C

Notes:

1. Unit mounted on 5" x 6" x 4.9" (12.8cm x 15.2cm x 12.4cm) AL finned plate
2. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw

Lead Free
RoHS Compliant

RATINGS AND CHARACTERISTIC CURVES BR2505 THRU BR2510

FIG.1-DERATING CURVE FOR
OUTPUT RECTIFIED CURRENT

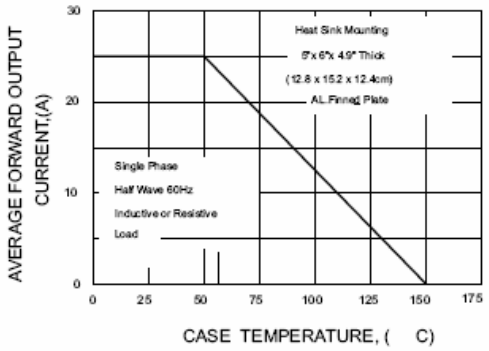


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT PER ELEMENT

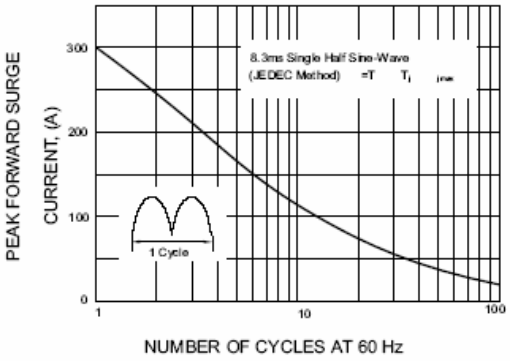


FIG.3-TYPICAL FORWARD CHARACTERISTICS
PER BRIDGE ELEMENT

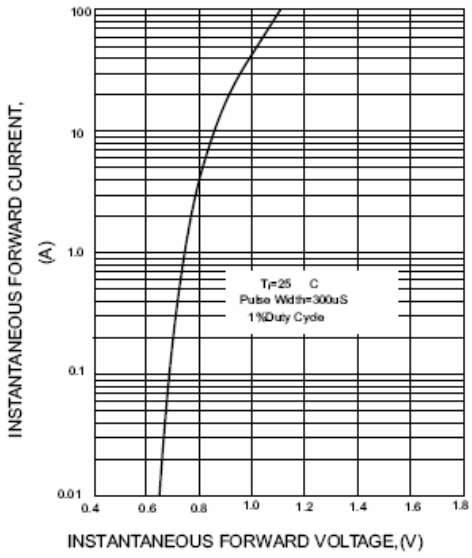


FIG.4-TYPICAL REVERSE CHARACTERISTICS
PER BRIDGE ELEMENT

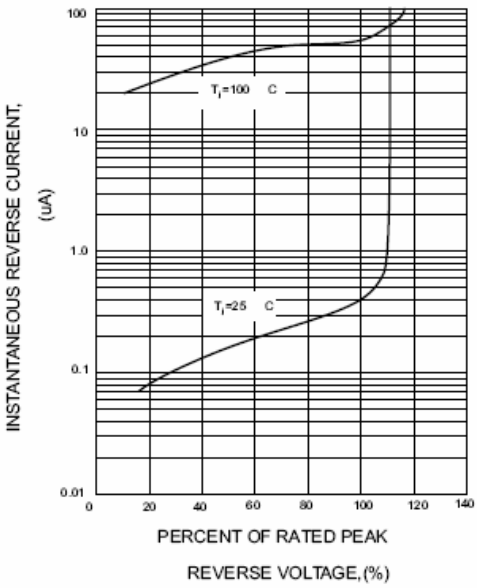


FIG.5-TYPICAL JUNCTION CAPACITANCE
PER BRIDGE ELEMENT

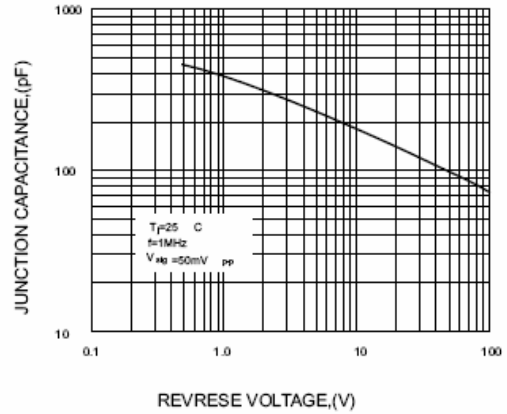


FIG.6-MAXIMUM POWER DISSIPATION