RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

UG860

ULTRAFAST RECTIFIER

VOLTAGE 600 Volts CURRENT 8.0 Ampere

FEATURES

* Ultrafast Recovery Time
* Soft Recovery Characteristics
* Low Forward Voltage
* Low Leakage Current
* Low Recovery Loss
* P/N suffix V means AEC-Q101 qualified, e.g:UG860V
* Halogen-free

MECHANICAL DATA

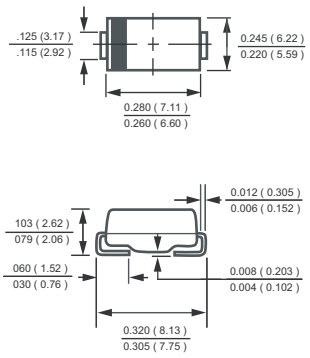
* Epoxy : Device has UL flammability classification 94V-0
* Mounting position: Any
* Weight: 0.25 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



SM C



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	UG860	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	600	Volts
Maximum RMS Voltage	V_{RMS}	420	Volts
Maximum DC Blocking Voltage	V_{DC}	600	Volts
Maximum Average Forward Rectified Current at T_C = 110 °C	I_O	8.0	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	80	Amps
Typical Current Squared Time	I^2t	26.6	A^2S
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	6.8	°C/W
	$R_{\theta JL}$	4.0	
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 175, -55 to + 150	°C

ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	UG860	UNITS
Maximum Instantaneous Forward Voltage at 8.0A DC		V_F	2.30	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	10.0	uAmps
	@T_A = 125°C		100	
Maximum Reverse Recovery Time (Note 1)		trr	16	nSec

2020-06
REV:A

NOTES : 1. Reverse Recovery Test Conditions: IF = 0.5A, IR = -1.0A, IRR = -0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts
3. "ROHS compliant"
4. Thermal Resistance : Mounted on PCB.

RATING AND CHARACTERISTICS CURVES (UG860)

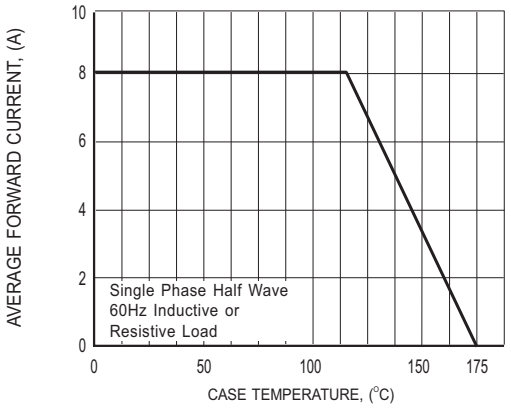


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

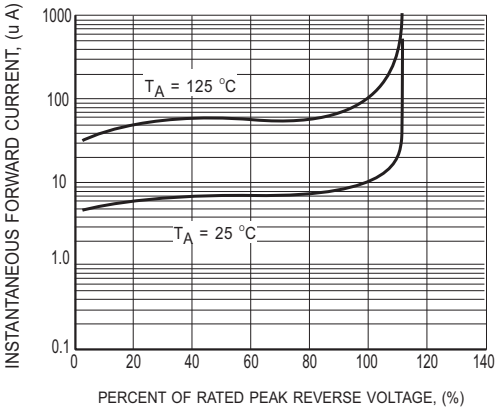


FIG.2 MAXIMUM REVERSE CHARACTERISTICS

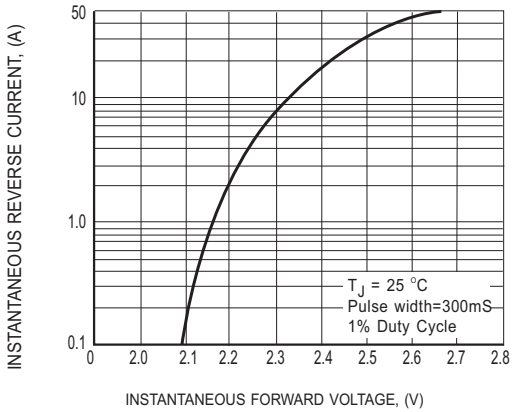


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

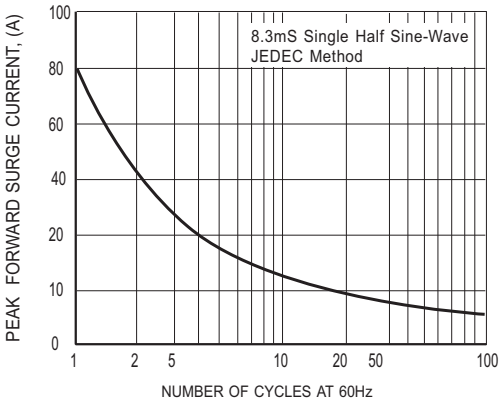
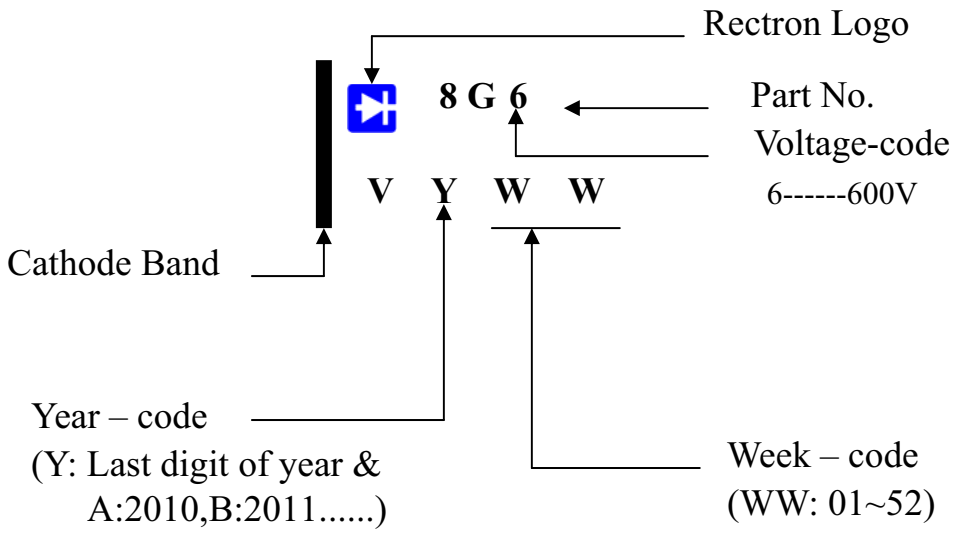


FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMC	-W/-T	3,000	3,000	---	---	330	360*355*360	24,000	11.50

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