RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

6A05V THRU 6A10V

SILICON RECTIFIER

VOLTAGE RANGE 1000 Volts CURRENT 6.0 Amperes

FEATURES

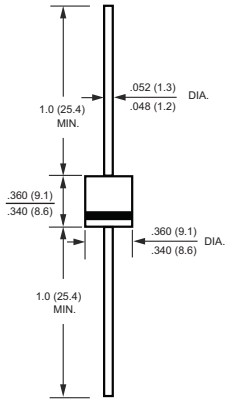
* High surge current capability
* Low leakage
* Low forward voltage drop
* High current capability
* Low lost
* P/N suffix V means AEC-Q101 qualified, e.g:6A05V
* P/N suffix V means Halogen-free

MECHANICAL DATA

* Case: Molded plastic black body
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 2.08 grams



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Dimensions in inches and (millimeters)

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%.

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

RATINGS	SYMBOL	6A05V	6A1V	6A2V	6A4V	6A6V	6A8V	6A10V	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1000							Volts
Maximum RMS Voltage	V_{RMS}	700							Volts
Maximum DC Blocking Voltage	V_{DC}	1000							Volts
Maximum Average Forward Rectified Current at TA = 50°C	I_O	6.0							Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	400							Amps
Current Squarad Time	I^2t	663.7							A^2Sec
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	10							°C/W
Typical Junction Capacitance (Note 1)	C_J	150							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							°C

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

CHARACTERISTICS		SYMBOL	6A05V	6A1V	6A2V	6A4V	6A6V	6A8V	6A10V	UNITS
Maximum Forward Voltage at 6.0A DC		V_F	1.0							Volts
Maximum DC Average Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	0.3							uAmps
	@T_A = 150°C		1.5							mAmps

NOTES : 1. Measured at 1.0 MHz and applied average voltage of 4.0VDC
2. Thernal Resistance: At 9.5mm lead lengths,PCB mounted.

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RATING AND CHARACTERISTICS CURVES (6A05V THRU 6A10V)

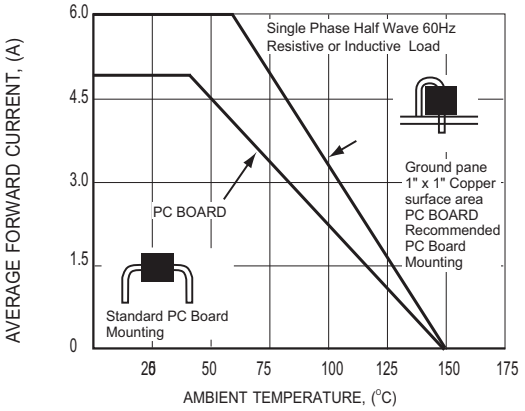


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

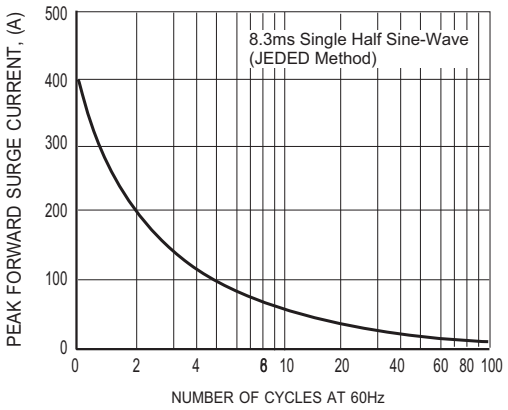


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

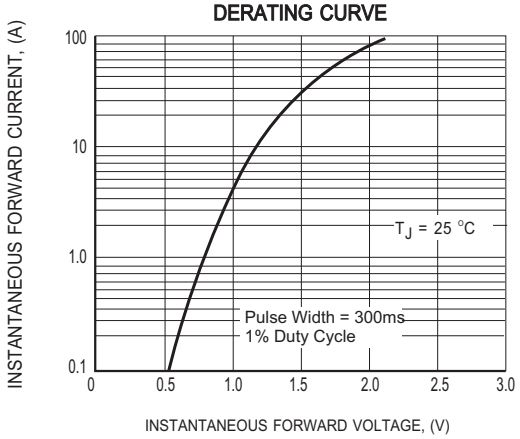


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

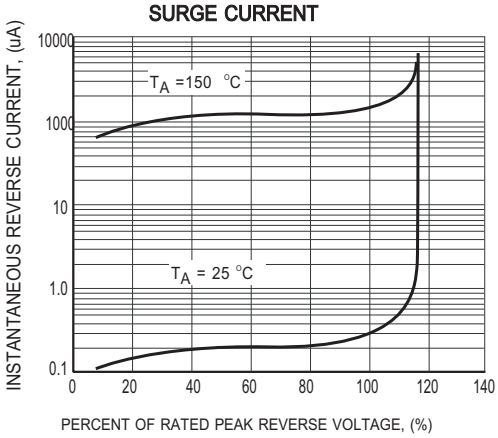


FIG.4 MAXIMUM REVERSE CHARACTERISTICS

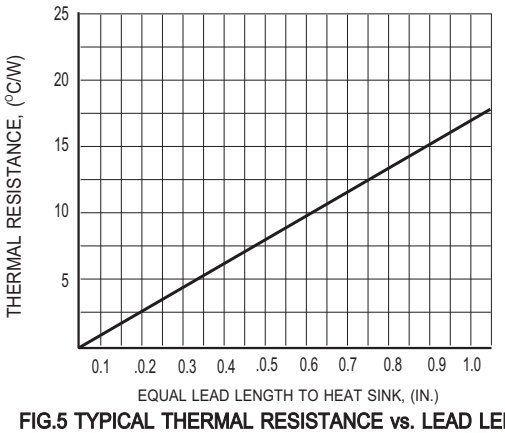
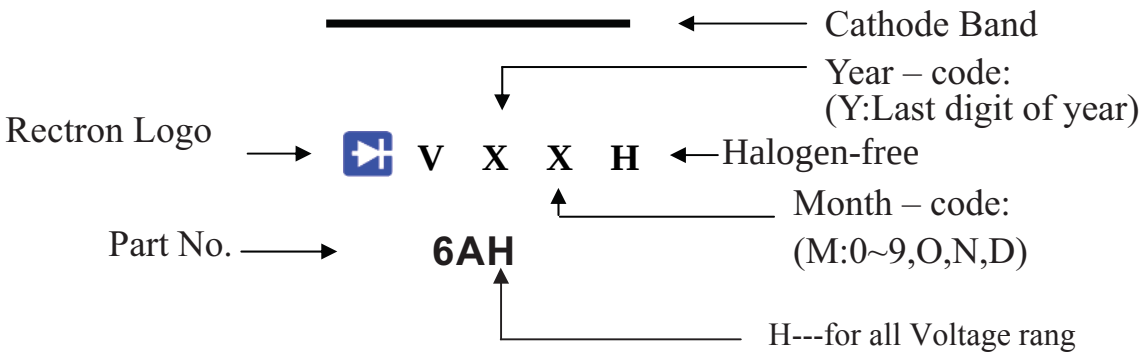


FIG.5 TYPICAL THERMAL RESISTANCE vs. LEAD LENGTH

Marking Description



AXIAL LEAD TAPING SPECIFICATIONS FOR RECTIFIERS

Axial lead devices are packed in accordance with EIA standard RS-296-D and specifications given below.

COMPNENT OUTLINE	COMPONENT PITCH A	INNER TAPE PITCH B		CUMULATIVE PITCH TOLERANCE
	±0.5mm (.020")	±0.5mm (.020")	±1.5mm (.059")	
T-1	5.0mm	26.0mm		2.0mm/20pitch
R-1	5.0mm	26.0mm		2.0mm/20pitch
R-1	5.0mm		52.4mm	2.0mm/20pitch
A-405	5.0mm	26.0mm		2.0mm/20pitch
A-405	5.0mm		52.4mm	2.0mm/20pitch
DO-41	5.0mm	26.0mm		2.0mm/20pitch
DO-41	5.0mm		52.4mm	2.0mm/10pitch
DO-15	5.0mm		52.4mm	2.0mm/10pitch
R-3	5.0mm		52.4mm	2.0mm/10pitch
DO-201AD	10.0mm		52.4mm	2.0mm/10pitch
R-6	10.0mm		52.4mm	2.0mm/10pitch
1.5KE	10.0mm		52.4mm	2.0mm/10pitch

Note: -E for 26mm inner tape pitch
-F & -T for 52mm inner tape pitch

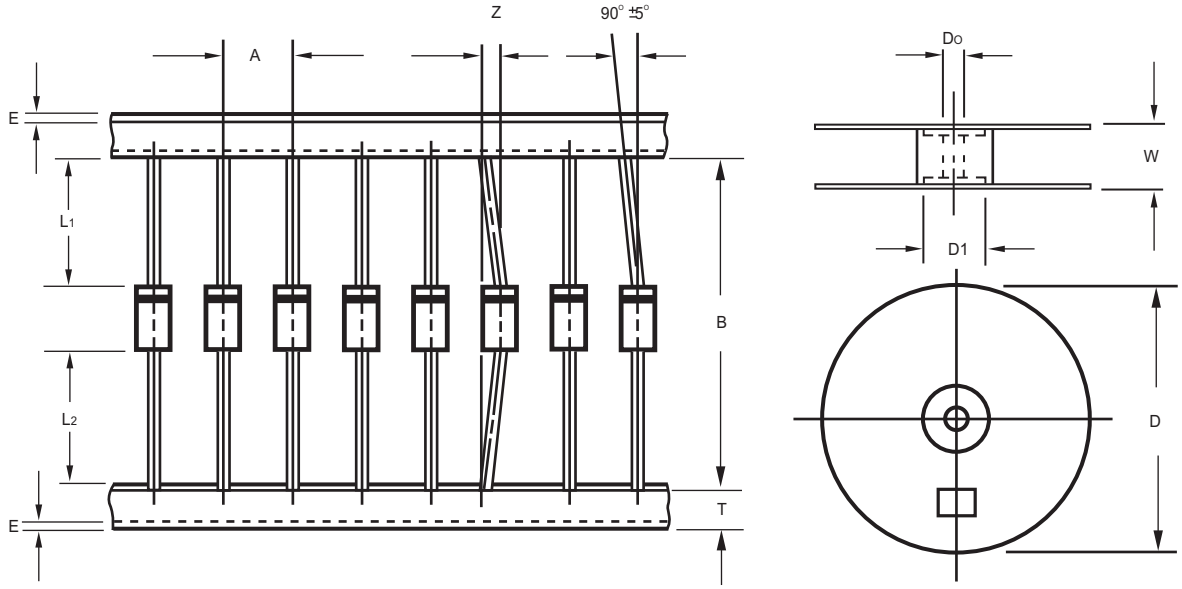


Fig.: Configuration of AXIAL LEAD TAPING

ITEM	SYMBOL	SPECIFICATIONS (mm)	SPECIFICATIONS (inch)
Component alignment	Z	1.2 Max.	0.048 Max.
Tape width	T	6.0± 0.4	0.236± 0.016
Exposed adhesive	E	0.8 Max.	0.032 Max.
Body eccentricity	IL1-L2I	1.0 Max.	0.040 Max.
Reel outside diameter	D	330.0	13.0
Reel inner diameter	D1	85.7± 0.3	3.375± 0.012
Feed hole diameter	Do	30.5± 0.4	1.201± 0.016
Reel width	W	79.0± 1.0	3.110± 0.040

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Notes : 1.Each component lead shall be sandwiched between tapes for a minimum of 3.2mm (0.126").
2.The reel width "W" for 26mm taping is 50.0±1.0mm (1.97" ± 0.040").

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
R-6/R-7	-B	200	300*73*40	347*320*271	4,800	12.93/14.57

eg(TYPE):6A10-B

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)
R-6/R-7	-T	800	800	9.5	52	330	355*350*335	3,200	9.72/9.91

eg(TYPE):6A10-T

AMMO PACK

PACKAGE	PACKING CODE	REEL (EA)	COMPONENT SPACE(mm)	TAPE SPACE (mm)	BOX SIZE (mm)	CARTON SIZE(mm)	CARTON (EA)	GROSS WEIGHT (Kg)
R-6/R-7	-F	300	9.5	52	255*73*100	400*268*225	3,000	8.5/8.7

eg(TYPE):6A10-F

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