

### FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
<b>Repetitive peak forward and reverse blocking voltage</b> <sup>(1)</sup> (1/2 sine wave, $R_{GK} = 1000\Omega$ , $T_C = -40$ to $+110^\circ\text{C}$ )			
2N6236		30	Volts
2N6237	$V_{DRM}$	50	
2N6238	$V_{RRM}$	100	
2N6239		200	
2N6240		400	
2N6241		600	
<b>Non-repetitive peak reverse blocking voltage</b> (1/2 sine wave, $R_{GK} = 1000\Omega$ , $T_C = -40$ to $+110^\circ\text{C}$ )			
2N6236		50	Volts
2N6237	$V_{RSM}$	100	
2N6238		150	
2N6239		250	
2N6240		450	
2N6241		650	
<b>Average on-state current</b> ( $T_C = -40$ to $+90^\circ\text{C}$ ) ( $T_C = 100^\circ\text{C}$ )	$I_{T(AV)}$	2.6 1.6	Amps
<b>Surge on-state current</b> (1/2 sine wave, 60Hz, $T_C = 90^\circ\text{C}$ ) (1/2 sine wave, 1.5ms, $T_C = 90^\circ\text{C}$ )	$I_{TSM}$	25 35	Amps
<b>Circuit fusing</b> ( $T_C = -40$ to $+110^\circ\text{C}$ , $t = 8.3\text{ms}$ )	$I^2t$	2.6	$\text{A}^2\text{s}$
<b>Peak gate power</b> (pulse width = $10\mu\text{s}$ , $T_C = 90^\circ\text{C}$ )	$P_{GM}$	0.5	Watts
<b>Average gate power</b> ( $t = 8.3\text{ms}$ , $T_C = 90^\circ\text{C}$ )	$P_{G(AV)}$	0.1	Watts
<b>Peak forward gate current</b>	$I_{GM}$	0.2	Amps
<b>Peak reverse gate voltage</b>	$V_{RGM}$	6	Volts
<b>Operating junction temperature range</b>	$T_J$	-40 to 110	$^\circ\text{C}$
<b>Storage temperature range</b>	$T_{stg}$	-40 to 150	$^\circ\text{C}$
<b>Stud torque</b>		6	In. lb.

Note 1: Ratings apply for zero or negative gate voltage. Devices shall not have a positive bias applied to the gate concurrently with a negative potential on the anode. Devices should not be tested with a constant source for forward or reverse blocking capability such that the voltage applied exceeds the rated blocking voltage.

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal resistance, junction to case	$R_{\theta JC}$	3	$^\circ\text{C}/\text{W}$
Thermal resistance, junction to ambient	$R_{\theta JA}$	75	$^\circ\text{C}/\text{W}$

**ELECTRICAL CHARACTERISTICS** ( $T_C = 25^\circ\text{C}$ ,  $R_{GK} = 1000\Omega$  unless otherwise noted)

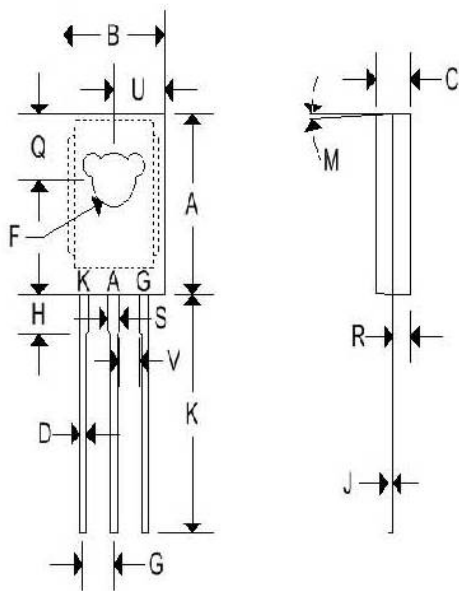
Characteristic	Symbol	Min	Typ	Max	Unit
<b>Peak forward or reverse blocking current</b> (Rated $V_{DRM}$ or $V_{RRM}$ ) $T_C = 25^\circ\text{C}$ $T_C = 110^\circ\text{C}$	$I_{DRM}, I_{RRM}$	- -	- -	10 200	$\mu\text{A}$
<b>Peak forward "on" voltage</b> ( $I_{TM} = 8.2\text{A}$ peak, pulse width = 1 to 2ms, 2% duty cycle)	$V_{TM}$	-	-	2.2	Volts
<b>Gate trigger current (continuous dc)</b> ( $V_{AK} = 12\text{Vdc}$ , $R_L = 24\Omega$ ) ( $V_{AK} = 12\text{Vdc}$ , $R_L = 24\Omega$ , $T_C = -40^\circ\text{C}$ )	$I_{GT}$	- -	- -	200 500	$\mu\text{A}$
<b>Gate trigger voltage (continuous dc)</b> (Source voltage = 12V, $R_S = 50\Omega$ ) ( $V_{AK} = 12\text{Vdc}$ , $R_L = 24\Omega$ , $T_C = -40^\circ\text{C}$ )	$V_{GT}$	-	-	1	Volts
<b>Gate non-trigger voltage</b> ( $V_{AK} = \text{rated } V_{DRM}$ , $R_L = 100\Omega$ , $T_C = 110^\circ\text{C}$ )	$V_{GD}$	0.2	-	-	Volts
<b>Holding current</b> ( $V_{AK} = 12\text{Vdc}$ , $I_{GT} = 2\text{mA}$ ) (initiating on state current = 200mA) $T_C = 25^\circ\text{C}$ $T_C = -40^\circ\text{C}$	$I_H$	- -	- -	5 10	mA
<b>Total turn-on time</b> (Source voltage = 12V, $R_S = 6k\Omega$ ) ( $I_{TM} = 8.2\text{A}$ , $I_{GT} = 2\text{mA}$ , rated $V_{DRM}$ ) (Rise time = 20ns, pulse width = 10 $\mu\text{s}$ )	$t_{gt}$	-	-	2	$\mu\text{s}$
<b>Forward voltage application rate</b> ( $V_D = \text{Rated } V_{DRM}$ , $T_C = 110^\circ\text{C}$ )	dv/dt	-	10	-	V/ $\mu\text{s}$

# 2N6236-2N6241

## SILICON CONTROLLED RECTIFIERS

### MECHANICAL CHARACTERISTICS

<b>Case:</b>	TO-126
<b>Marking:</b>	Body painted, alpha-numeric
<b>Pin out:</b>	See below

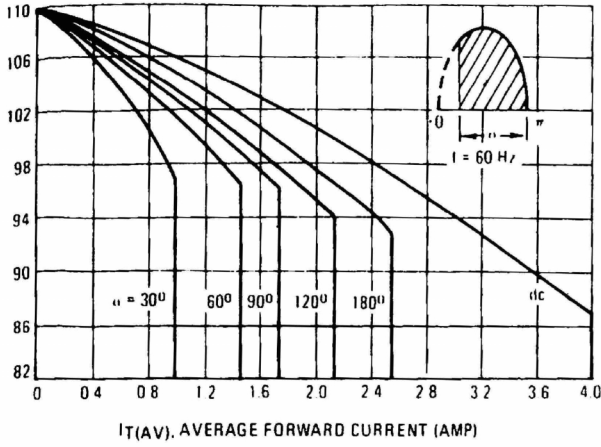


	TO-126			
	Inches		Millimeters	
	Min	Max	Min	Max
<b>A</b>	0.425	0.435	10.80	11.050
<b>B</b>	0.295	0.305	7.490	7.750
<b>C</b>	0.095	0.105	2.410	2.670
<b>D</b>	0.020	0.026	0.510	0.660
<b>F</b>	0.115	0.125	2.920	3.180
<b>G</b>	0.091	0.097	2.310	2.460
<b>H</b>	0.050	0.095	1.270	2.410
<b>J</b>	0.015	0.025	0.380	0.640
<b>K</b>	0.595	0.655	15.110	16.640
<b>M</b>	3° TYP		3° TYP	
<b>Q</b>	0.148	0.158	3.760	4.010
<b>R</b>	0.045	0.055	1.140	1.400
<b>S</b>	0.025	0.035	0.640	0.890
<b>U</b>	0.145	0.155	3.680	3.940
<b>V</b>	0.040	-	1.020	-

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## SILICON CONTROLLED RECTIFIERS

**FIGURE 1 – MAXIMUM CASE TEMPERATURE**



**FIGURE 2 – MAXIMUM AMBIENT TEMPERATURE**

