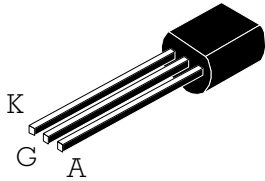
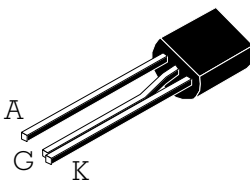


**SENSITIVE GATE SCR**

<b>TO92 (Plastic)</b>	<b>RD26 (Plastic)</b>	<b>On-State Current</b> 0.8 Amp	<b>Gate Trigger Current</b> < 200 $\mu$ A
		<b>Off-State Voltage</b> 200 V $\div$ 600 V	
 <b>FS01...A</b>	 <b>FS01...B</b>	This series of <b>Silicon C</b> ontrolled <b>R</b> ectifiers uses a high performance PNPN technology.  This part is intended for general purpose applications where high gate sensitivity is required.	

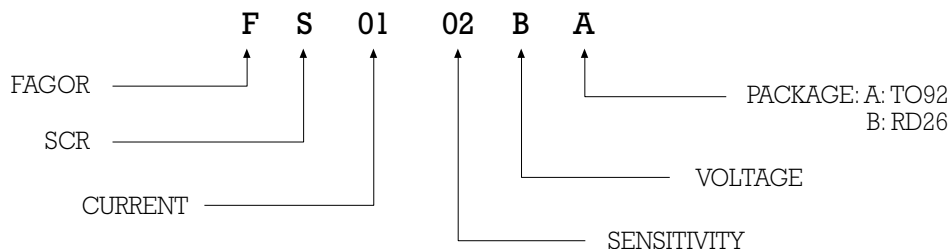
**Absolute Maximum Ratings, according to IEC publication No. 134**

SYMBOL	PARAMETER	CONDITIONS	Min.	Max.	Unit
$I_{T(RMS)}$	On-state Current	All Conduction Angle, $T_L = 60^\circ\text{C}$	0.8		A
$I_{T(AV)}$	Average On-state Current	Half Cycle, $\theta = 180^\circ$ , $T_L = 60^\circ\text{C}$	0.5		A
$I_{TSM}$	Non-repetitive On-State Current	Half Cycle, 60 Hz, $T_j = 25^\circ\text{C}$	8		A
$I_{TSM}$	Non-repetitive On-State Current	Half Cycle, 50 Hz, $T_j = 25^\circ\text{C}$	7		A
$I^2t$	Fusing Current	$t = 10\text{ms}$ , Half Cycle	0.24		$\text{A}^2\text{s}$
$V_{GRM}$	Peak Reverse Gate Voltage	$I_{GR} = 10 \mu\text{A}$	8		V
$I_{GM}$	Peak Gate Current	20 $\mu\text{s}$ max.		1	A
$P_{GM}$	Peak Gate Dissipation	20 $\mu\text{s}$ max.		2	W
$P_{G(AV)}$	Gate Dissipation	20ms max.		0.1	W
$T_j$	Operating Temperature		-40	+125	$^\circ\text{C}$
$T_{stg}$	Storage Temperature		-40	+150	$^\circ\text{C}$
$T_{std}$	Soldering Temperature	1.6 mm from case, 10s max.		260	$^\circ\text{C}$

SYMBOL	PARAMETER	CONDITIONS	VOLTAGE			Unit
			B	D	M	
$V_{DRM}$ $V_{RRM}$	Repetitive Peak Off State Voltage	$T_j = -40$ to $+125^\circ\text{C}$ , $R_{GK} = 1 \text{K}$	200	400	600	V

**SENSITIVE GATE SCR**
**Electrical Characteristics**

SYMBOL	PARAMETER	CONDITIONS	SENSITIVITY		Unit
			01	02	
$I_{GT}$	Gate Trigger Current	$V_D = 12 V_{DC}, R_L = 140 \Omega, T_j = 25^\circ C$	MIN MAX	1 20	$\mu A$
$I_{DRM} / I_{RRM}$	Off-State Leakage Current	$V_D = V_{DRM}, R_{GK} = 1K, T_j = 125^\circ C$ $V_R = V_{RRM}, T_j = 25^\circ C$	MAX MAX	100 1	$\mu A$
$V_{TM}$	On-state Voltage	at $I_T = 1.6 \text{ Amp}, t_p = 380 \mu s, T_j = 25^\circ C$	MAX	1.93	V
$V_{T(TO)}$	On-state Threshold Voltage	$T_j = 125^\circ C$	MAX	0.95	V
$r_T$	On-state slope Resistance	$T_j = 125^\circ C$	MAX	600	m
$V_{GT}$	Gate Trigger Voltage	$V_D = 12 V_{DC}, R_L = 140 \Omega, T_j = 25^\circ C$	MAX	0.8	V
$I_H$	Holding Current	$I_T = 50 \text{ mA}, R_{GK} = 1K, T_j = 25^\circ C$	MAX	5	mA
$I_L$	Latching Current	$I_G = 1 \text{ mA}, R_{GK} = 1K, T_j = 25^\circ C$	MAX	6	mA
$dv / dt$	Critical Rate of Voltage Rise	$V_D = 0.67 \times V_{DRM}, R_{GK} = 1K, T_j = 125^\circ C$	MIN	75	V/ $\mu s$
$di / dt$	Critical Rate of Current Rise	$I_G = 10 \text{ mA}, di_G/dt = 0.1 \text{ A}/\mu s, T_j = 125^\circ C$	MIN	30	A/ $\mu s$
$t_{gd}$	Gate Controlled Delay Time	$I_G = 10 \text{ mA}, di_G/dt = 0.1 \text{ A}/\mu s, T_j = 25^\circ C$ $I_{TM} = 3 \times I_{T(AV)} V_D = V_{DRM}$	TYP	500	ns
$t_q$	Commutated Turn-Off Time	$I_{TM} = 3 \times I_{T(AV)} V_R = 35 \text{ V}$ $di/dt = 10 \text{ A}/\mu s t_p = 100 \mu s$ $dv/dt = 10 \text{ V}/\mu s T_j = 125^\circ C$ $V_D = 67\% V_{DRM} R_{GK} = 1K$	MAX	200	$\mu s$
$R_{th(j-l)}$	Thermal Resistance Junction-Leads for DC			80	$^\circ C/W$
$R_{th(j-a)}$	Thermal Resistance Junction-Ambient			150	$^\circ C/W$

**PART NUMBER INFORMATION**


**SENSITIVE GATE SCR**

Fig. 1: Maximum average power dissipation versus average on-state current

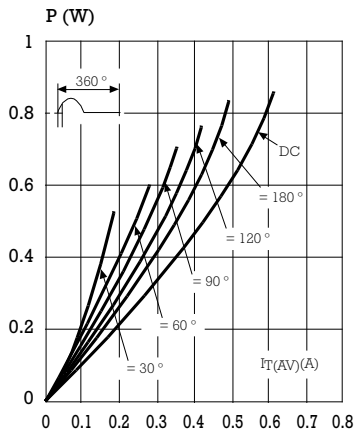


Fig. 2: Correlation between maximum average power dissipation and maximum allowable temperature (Tamb and T lead).

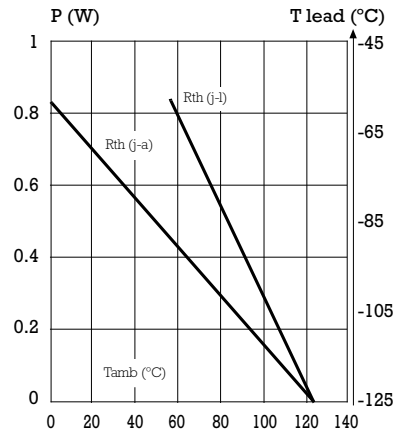


Fig. 3: Average on-state current versus lead temperature

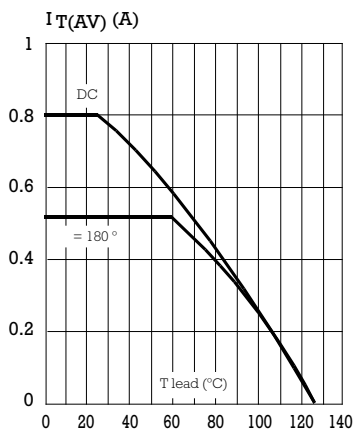


Fig. 4: Relative variation of thermal impedance junction to ambient versus pulse duration.

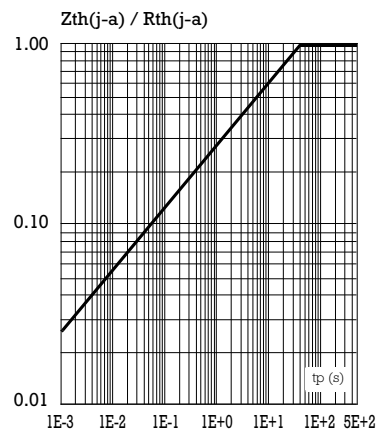


Fig. 5: Relative variation of gate trigger current and holding current versus junction temperature.

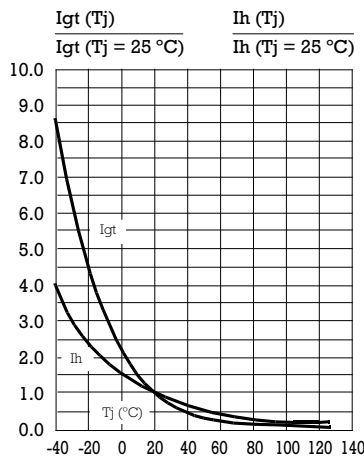
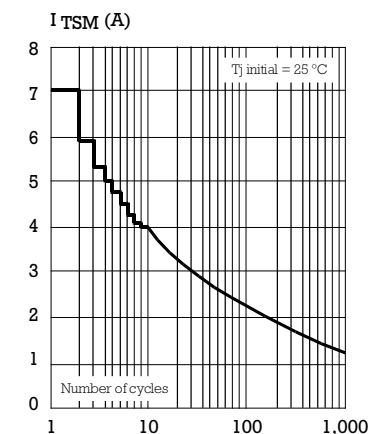


Fig. 6: Non repetitive surge peak on-state current versus number of cycles.



## SENSITIVE GATE SCR

Fig. 7: Non repetitive surge peak on-state current for a sinusoidal pulse with width:  $t_p = 10$  ms, and corresponding value of  $I^2t$ .

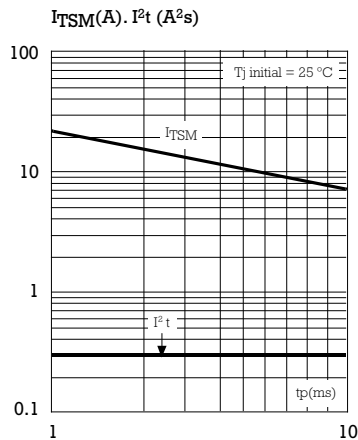


Fig. 8: On-state characteristics (maximum values).

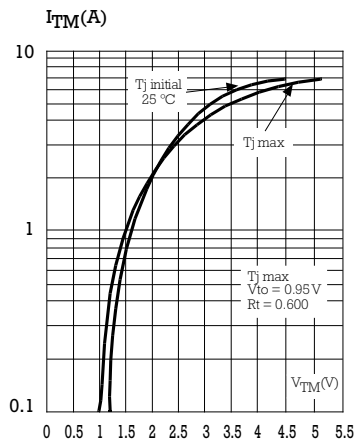
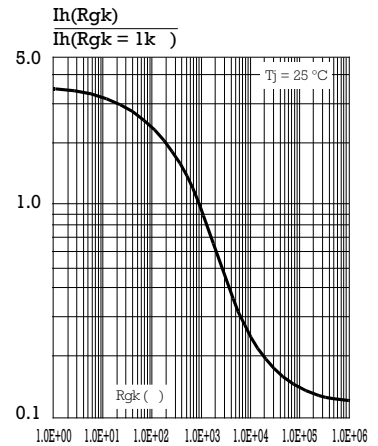
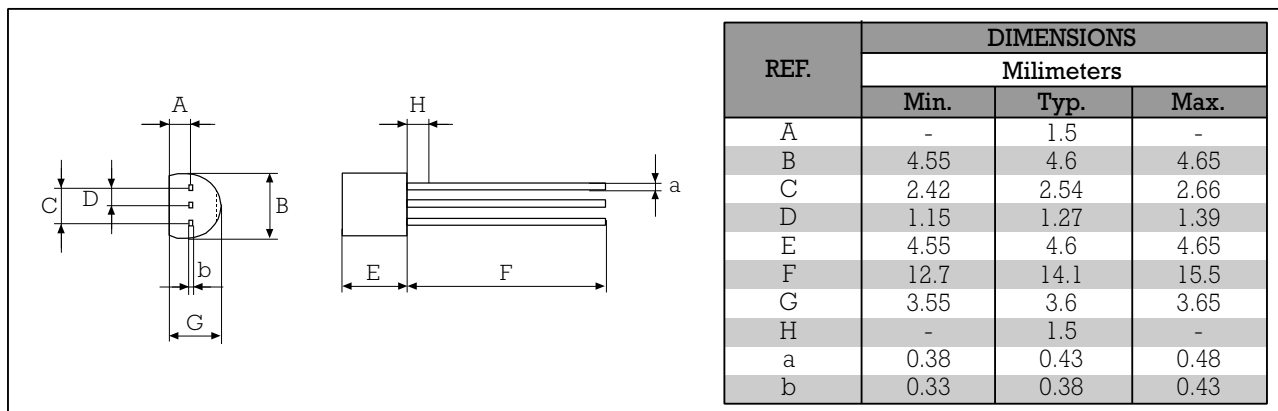


Fig. 9: Relative variation of holding current versus gate-cathode resistance (typical values).

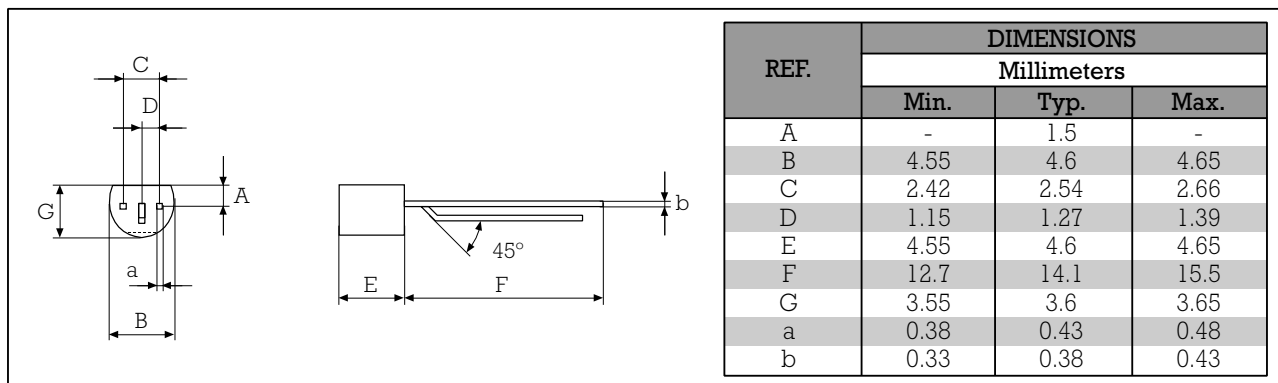


### PACKAGE MECHANICAL DATA TO92 (Plastic)



Marking: type number  
Weight: 0.2 g

### PACKAGE MECHANICAL DATA RD26 (Plastic)



Marking: type number  
Weight: 0.2 g