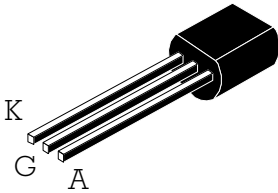
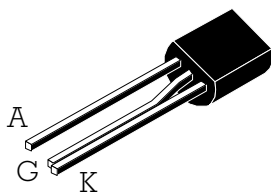


SENSITIVE GATE SCR

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

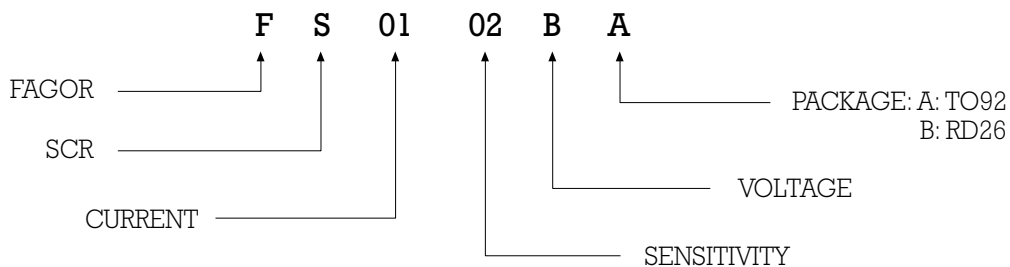
Absolute Maximum Ratings, according to IEC publication No. 134

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		A^2s
V_{GRM}	Peak Reverse Gate Voltage	$I_{GR} = 10 \mu\text{A}$	8		V
I_{GM}	Peak Gate Current	20 μs max.		1	A
P_{GM}	Peak Gate Dissipation	20 μs 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_{sld}	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 $+125^\circ\text{C}$, $R_{CK} = 1 \text{K}$	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	200 μA
I_{DRM} / I_{RRM}	Off-State Leakage Current	$V_D = V_{DRM}$, $R_{GK} = 1K \Omega$, $T_j = 125^\circ C$ $V_R = V_{RRM}$, $T_j = 25^\circ C$	MAX MAX	100 1	μA
V_{TM}	On-state Voltage	at $I_T = 1.6$ 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	$I_T = 50$ mA, $R_{GK} = 1K \Omega$, $T_j = 25^\circ C$	MAX	5	mA
I_L	Latching Current	$I_G = 1$ mA, $R_{GK} = 1K \Omega$, $T_j = 25^\circ C$	MAX	6	mA
dv / dt	Critical Rate of Voltage Rise	$V_D = 0.67 \times V_{DRM}$, $R_{GK} = 1K \Omega$, $T_j = 125^\circ C$	MIN	75	V/ μs
di / dt	Critical Rate of Current Rise	$I_G = 10$ mA, $di_G/dt = 0.1$ A/ μs , $T_j = 125^\circ C$	MIN	30	A/ μs
t_{gd}	Gate Controlled Delay Time	$I_G = 10$ mA, $di_G/dt = 0.1$ A/ μs , $T_j = 25^\circ C$ $I_{TM} = 3 \times I_{T(AV)}$ $V_D = V_{DRM}$	TYP	500	ns
t_q	Commutated Turn-Off Time	$I_{TM} = 3 \times I_{T(AV)}$ $V_R = 35$ V $di/dt = 10$ A/ μs $t_p = 100 \mu s$ $dv/dt = 10$ V/ μs $T_j = 125^\circ C$ $V_D = 67\% V_{DRM}$ $R_{GK} = 1K \Omega$	MAX	200	μs
$R_{th(j-l)}$	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

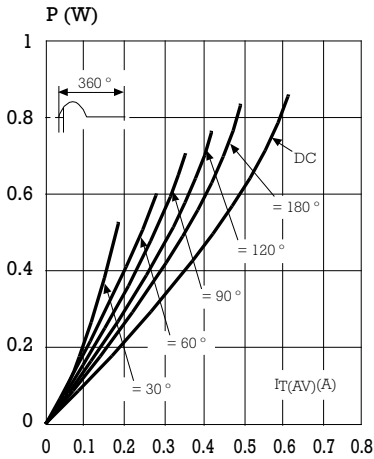


Fig. 3: Average on-state current versus lead temperature

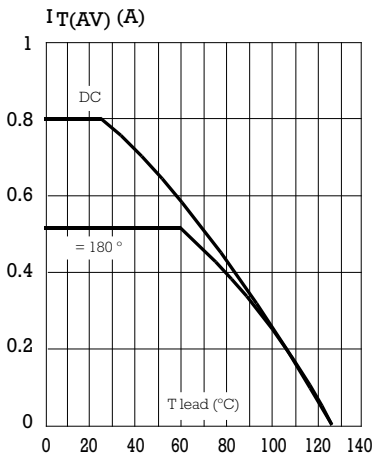


Fig. 5: Relative variation of gate trigger current and holding current versus junction temperature.

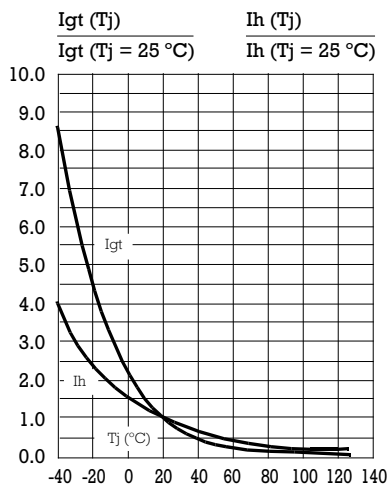


Fig. 2: Correlation between maximum average power dissipation and maximum allowable temperature (Tamb and T lead).

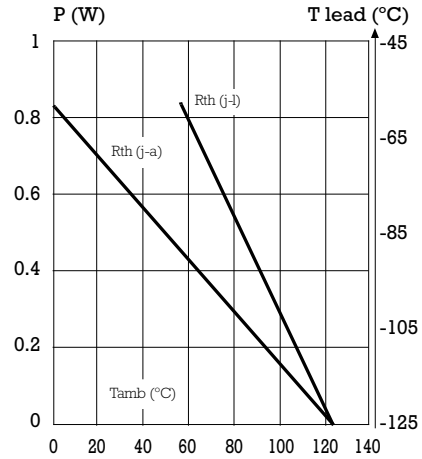


Fig. 4: Relative variation of thermal impedance junction to ambient versus pulse duration.

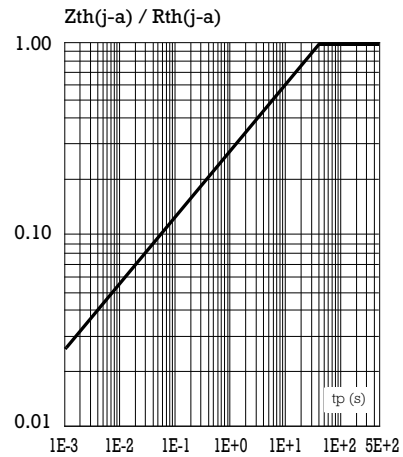
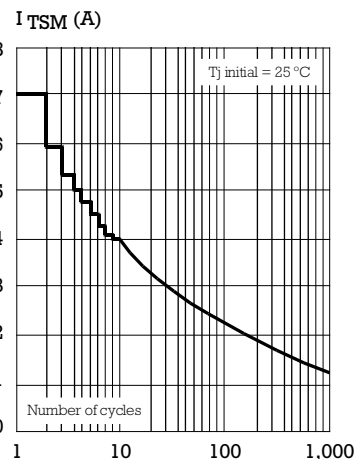


Fig. 6: Non repetitive surge peak on-state current versus number of cycles.



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 .

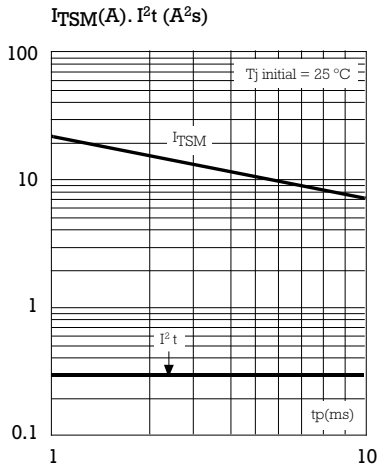


Fig. 8: On-state characteristics (maximum values).

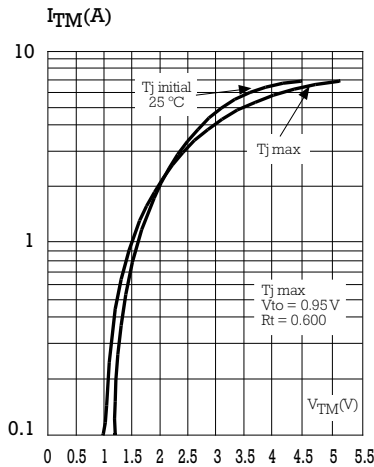
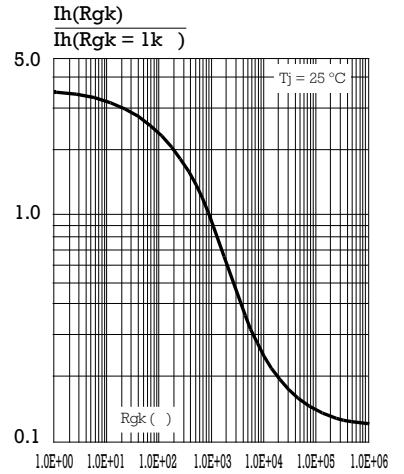
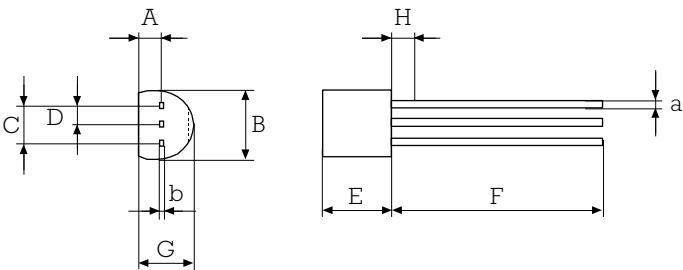


Fig. 9: Relative variation of holding current versus gate-cathode resistance (typical values).



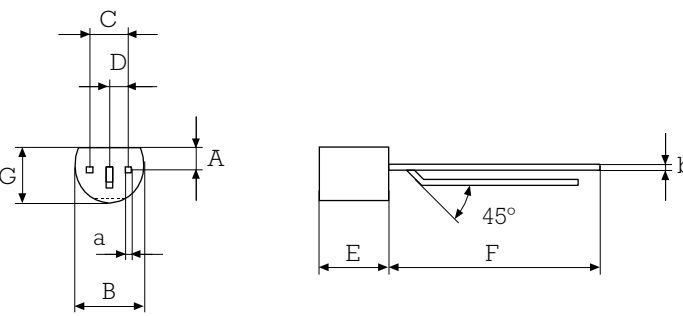
PACKAGE MECHANICAL DATA TO92 (Plastic)



REF.	DIMENSIONS		
	Millimeters		
	Min.	Typ.	Max.
A	-	1.5	-
B	4.55	4.6	4.65
C	2.42	2.54	2.66
D	1.15	1.27	1.39
E	4.55	4.6	4.65
F	12.7	14.1	15.5
G	3.55	3.6	3.65
H	-	1.5	-
a	0.38	0.43	0.48
b	0.33	0.38	0.43

Marking: type number
Weight: 0.2 g

PACKAGE MECHANICAL DATA RD26 (Plastic)



REF.	DIMENSIONS		
	Millimeters		
	Min.	Typ.	Max.
A	-	1.5	-
B	4.55	4.6	4.65
C	2.42	2.54	2.66
D	1.15	1.27	1.39
E	4.55	4.6	4.65
F	12.7	14.1	15.5
G	3.55	3.6	3.65
a	0.38	0.43	0.48
b	0.33	0.38	0.43

Marking: type number
Weight: 0.2 g