

GS75 Series

- Description:**

High current density due to double mesa technology;

- Applications:**

GS75 series of silicon controlled rectifiers are specifically designed for high power switching and phase control applications.

- Features:**

GS75 series are suitable for general purpose applications,

a high gate sensitivity is required

GS75 series are non-insulated design.

Blocking voltage to 1200/1600/1800V

On-state RMS current to 75A

Non-repetitive peak on-state current to 1000A

- Absolute Maximum Ratings**



Symbol	Parameter	Conditions	Min	Max	Unit
V_{DRM}	Repetitive peak off-state voltage	$T_J=25^\circ\text{C}$	1200	1800	V
V_{RRM}	Repetitive peak Reverse voltage	$T_J=25^\circ\text{C}$	1200	1800	V
$I_{T(RMS)}$	RMS on-state current (all conduction angles)	Lead current limitation	-	75	A
$I_{T(av)}$	Average on-state current (half sine wave)	$T_c=80^\circ\text{C}$	-	70	A
I_{TSM}	Non-repetitive peak On-state current (half sine cycle, $T_J=25^\circ\text{C}$)	$F=50\text{Hz}$, $t=10\text{ms}$	-	1000	A
		$F=60\text{Hz}$, $t=8.3\text{ms}$	-	1150	A
I^2t	I^2t Value for fusing	$T_p=10\text{ms}$	-	5000	A^2S
di/dt	Critical rate of rise of on-state current after triggering	$I_{TM}=20\text{A}$, $I_G=50\text{mA}$	-	150	$\text{A}/\mu\text{s}$
I_{GM}	Peak gate current		-	2.5	A
P_{GM}	Peak gate power	$T_p=20\mu\text{s}$, $T_J=125^\circ\text{C}$	-	10	W
$P_{G(AV)}$	Average gate power dissipation		-	2.0	W
T_{STG}	Storage temperature		-40	150	$^\circ\text{C}$
T_J	Junction temperature		-40	125	$^\circ\text{C}$

GS75 Series

Electrical Characteristics

Symbol	Conditions	Numerical		Unit
		MIN	MAX	
I_{GT}	$V_D=12V, R_L=33\Omega$	20	100	mA
V_{GT}			1.5	V
V_{GD}	$V_D=V_{DRM}, R_L=3.3K\Omega, T_J=125^\circ C$		0.2	V
I_L	$I_T=1.2I_{GT}$	/	200	mA
I_H	$I_T=500mA$	/	150	mA
dv/dt	$V_{DM}=67\%V_{DRM}, \text{gate open}, T_J=125^\circ C$	1000	1000	V/ μs

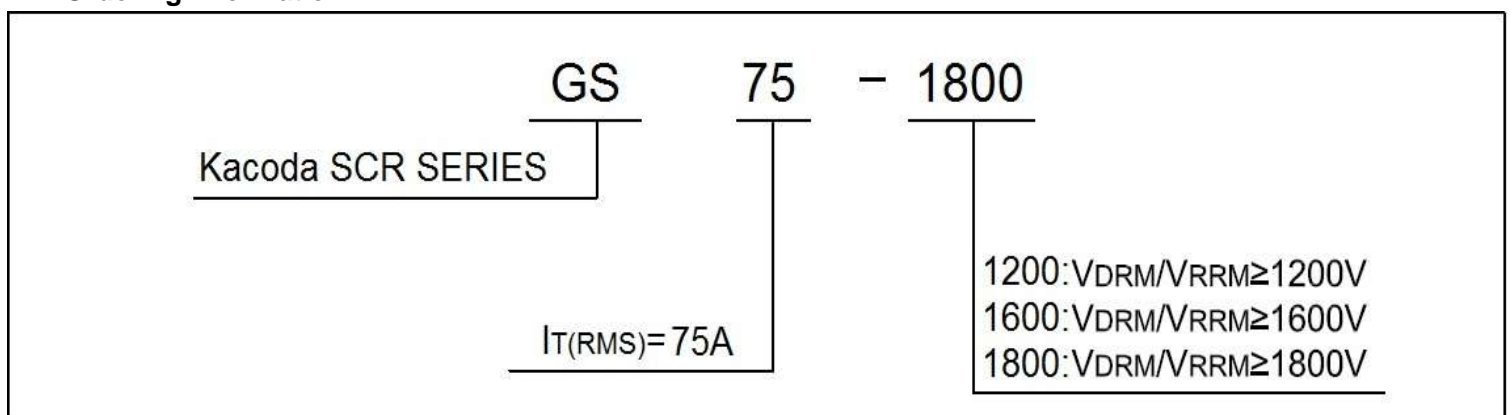
Electrical Characteristics

Symbol	Parameter	Numerical(MAX)	Unit
V_{TM}	$I_T=100A, t_p=380\mu s$ $T_J=25^\circ C$	1.55	V
I_{DRM}	$V_D=V_{DRM}, V_R=V_{RRM}$ $T_J=25^\circ C$	50	μA
I_{RRM}	$T_J=125^\circ C$	10	mA

Thermal Characteristics

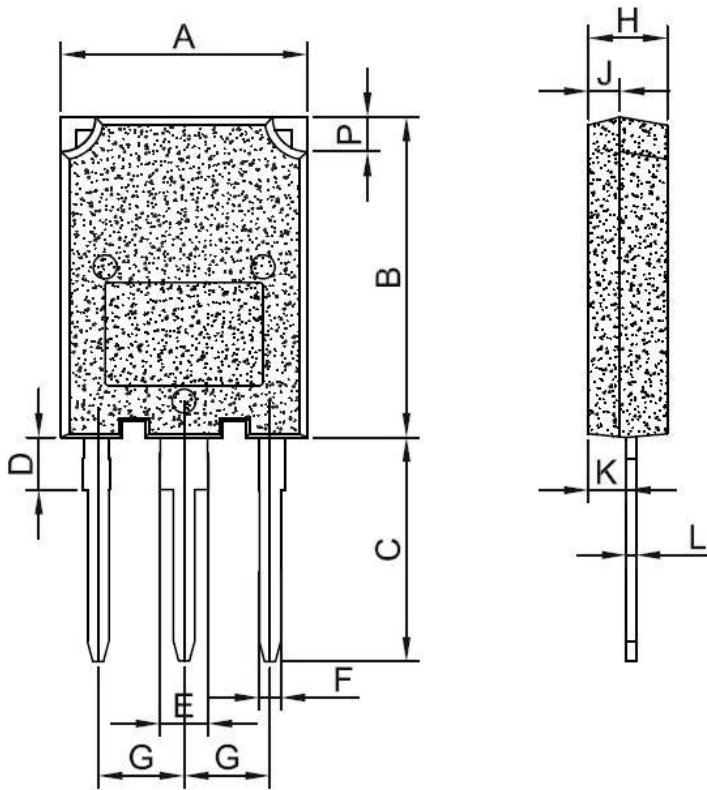
Symbol	Parameter	Numerical(MAX)	Unit
$R_{th(j-mb)}$	Thermal resistance from junction to mounting base	0.32	$^\circ C/W$

Ordering Information



● Package Outline Dimensions

Super-247(TO-247S)



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	15.1	16.1	0.595	0.632
B	19.8	20.8	0.78	0.818
C	13.8	14.8	0.544	0.582
D	3.0	4.0	0.118	0.157
E	2.75	3.35	0.108	0.132
F	1.3	1.5	0.051	0.059
G	5.1	5.8	0.201	0.228
H	4.5	5.5	0.178	0.216
J	1.45	2.15	0.058	0.084
K	1.9	2.8	0.075	0.110
L	0.55	0.8	0.022	0.032
P	2	2.4	0.079	0.095

● Marking

