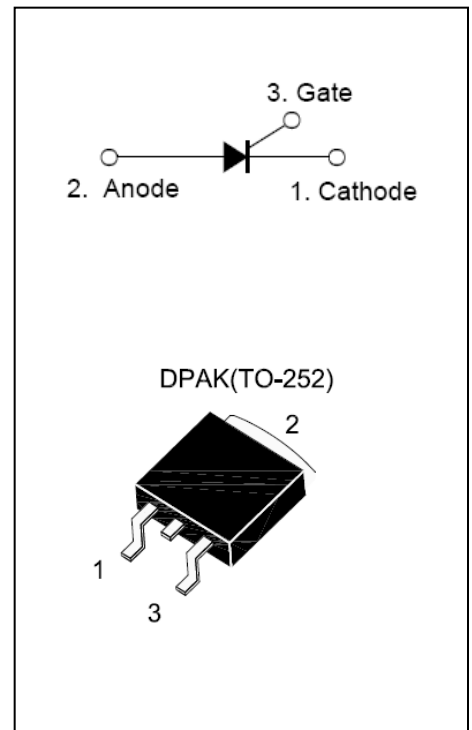




High sensitive triggering levels, the IPS6008 series SCRs is suitable for all applications, where the available gate current is limited, such as capacitive discharge ignitions, motor control in kitchen aids, overvoltage crowbar protection in low power supplies...

## MAIN FEATURES

Symbol	Value	Unit
$I_T(AV)$	4	A
$V_{DRM} / V_{RRM}$	600	V
$I_{GT}$	$\leq 200$	$\mu A$



## ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage Junction Temperature Range Operating Junction Temperature Range	$T_{stg}$ $T_j$	-40 to +150 -40 to +110	$^{\circ}C$
Repetitive Peak Off-state Voltage Repetitive Peak Reverse Voltage	$V_{DRM}$ $V_{RRM}$	600 600	V
RMS on-state current (180 conduction angle) $T_c = 35^{\circ}C$	$I_T(RMS)$	4	A
Average on-state current (180 conduction angle) $T_c = 35^{\circ}C$	$I_T(AV)$	2.5	A
Non repetitive surge peak on-state Current ( $T_j = 25^{\circ}C$ ) $t_p = 10ms$ $t_p = 8.3ms$	$I_{TSM}$	30 33	A
$I^2t$ Value for fusing $t_p = 10ms$	$I^2t$	4.5	$A^2s$
Peak gate current $t_p = 20\mu s, T_j = 110^{\circ}C$	$I_{GM}$	1.2	A
Average gate power dissipation $T_j = 110^{\circ}C$	$P_G(AV)$	0.2	W

## ELECTRICAL CHARACTERISTICS (Tj = 25 °C unless otherwise specified)

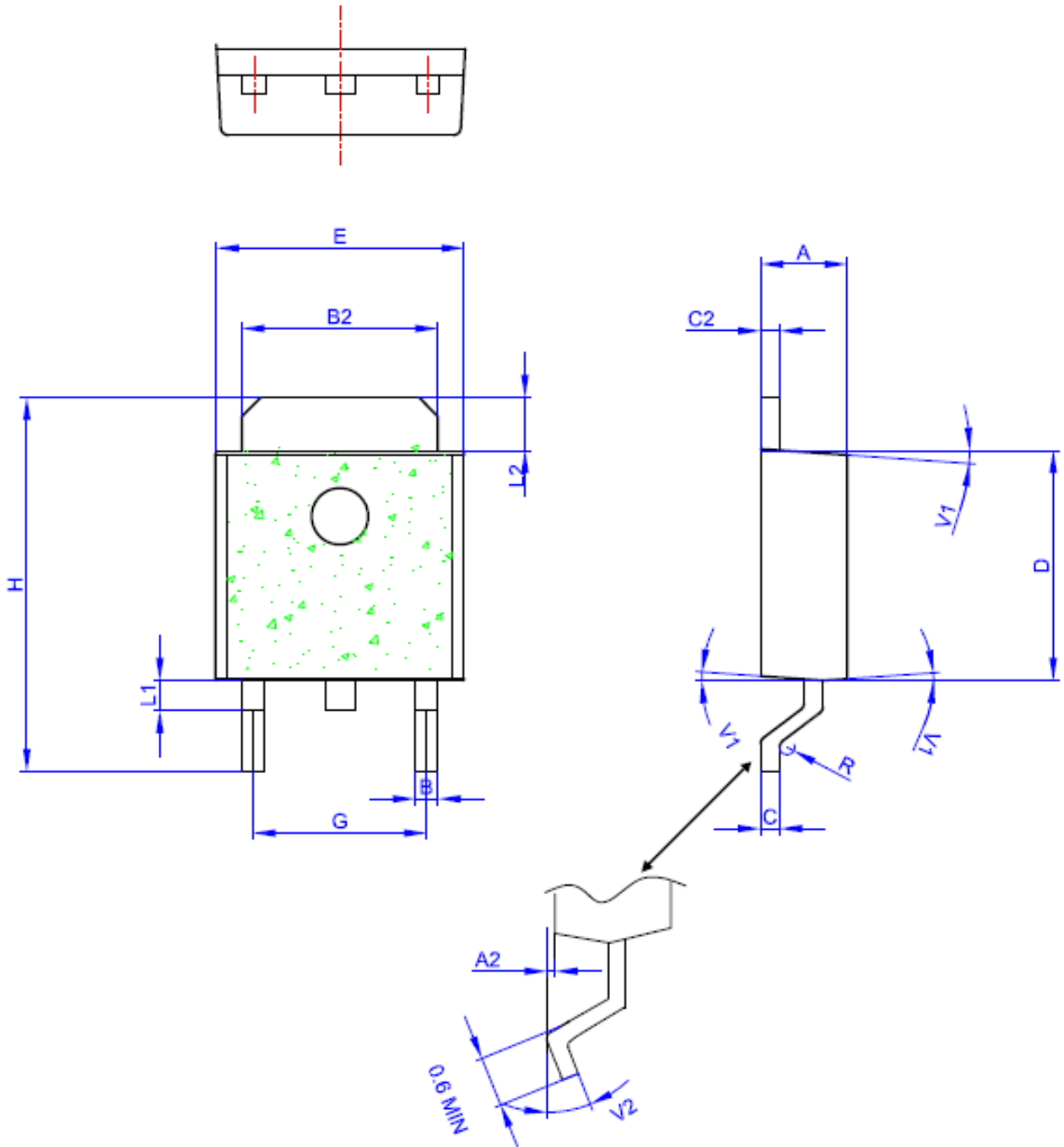
Symbol	Test Condition		IPS604-xxD				Unit
			03	05	06	08	
IGT	VD = 6V RL = 100Ω	MIN	10	20	30	50	uA
		MAX	30	50	60	80	
VGT		TYP	0.6				V
		MAX	0.8				
VGD	VD=VDRM, RL=3.3KΩ, RGK = 1KΩ Tj = 110 °C	MIN	0.2				V
IL	Ig = 1mA RGK = 1KΩ	MAX	6				mA
IH	It = 50mA RGK = 1KΩ	MAX	5				mA
VTM	It = 8A t p = 380uS Tj = 25 °C	TYP	1.4				V/us
		MAX	1.8				
dV/dt	VD = 67% VDRM RGK = 1KΩ Tj = 110 °C	MIN	10				V/us
IDRM	VD = VDRM RGK = 1KΩ Tj = 25 °C	MAX	5				uA
	VD = VDRM RGK = 1KΩ Tj = 110 °C	MAX	0.1				mA
IRRM	VR = VRRM RGK = 1KΩ Tj = 25 °C	MAX	5				uA
	VD = VRRM RGK = 1KΩ Tj = 110 °C	MAX	0.1				mA

## THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
Rth (j – c)	Junction to case	TO-252	2.8	°C/W

## PACKAGE MECHANICAL DATA

### TO-252(DPAK)



Ref	Dimensions					
	Millimeters			Inches		
	Min	Typ	Max	Min	Typ	Max
A	2.2		2.4	0.086		0.095
A2	0.03		0.23	0.001		0.009
B	0.55		0.65	0.021		0.026
B2	5.1		5.4	0.200		0.212
C	0.45		0.62	0.017		0.024
C2	0.48		0.62	0.019		0.024
D	6		6.2	0.236		0.244
E	6.4		6.7	0.252		0.264
G	4.40		4.70	0.173		0.185
H	9.35		10.1	0.368		0.397
L1		0.8			0.031	
L2	1.37		1.5	0.054		0.059
V1		4°			4°	
V1	0°		8°	0°		8°

FIG.1: Maximum power dissipation versus RMS on-state current(full cycle)

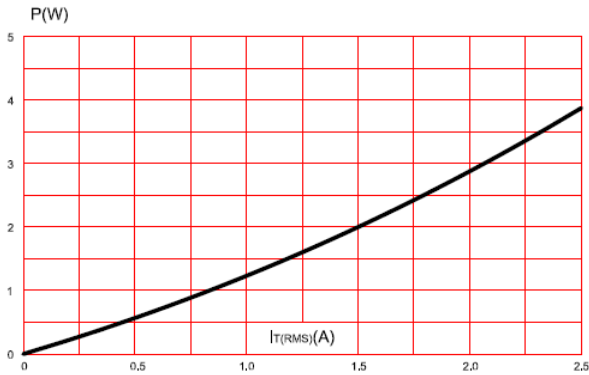


FIG.2: Average on-state current versus case temperature(full cycle)

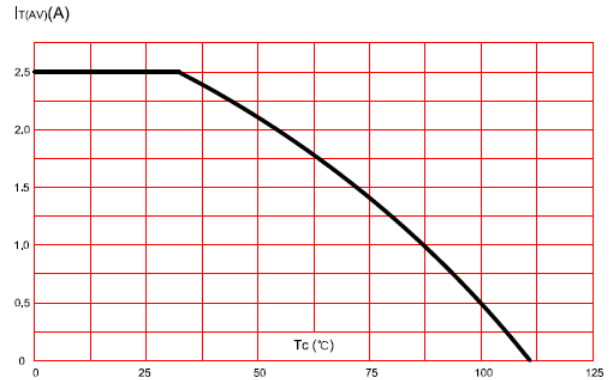


FIG.3: On-state characteristics (maximum values)

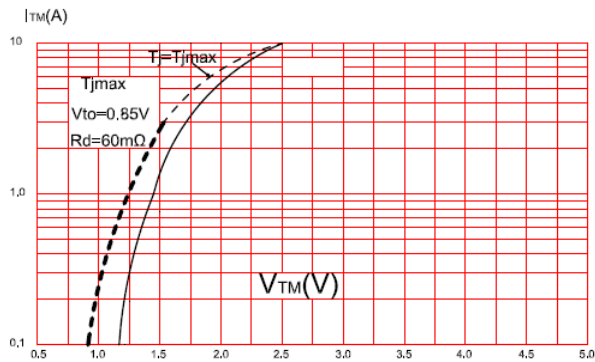


FIG.4: Surge peak on-state current versus number of cycles.

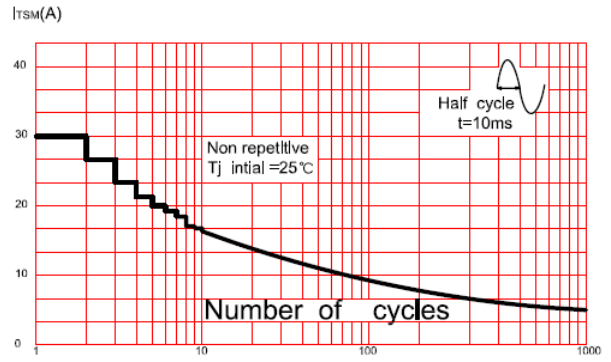


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width  $t_p < 10ms$ .

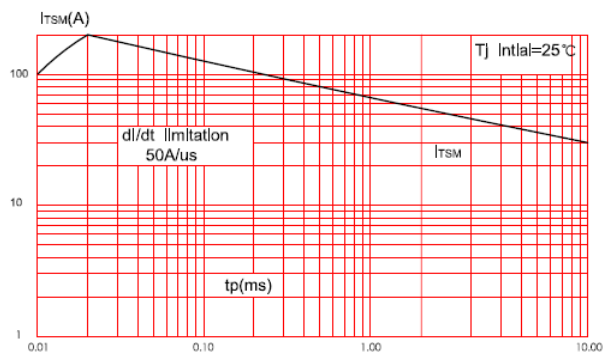


FIG.6: Relative variation of gate trigger current, holding current and latching current versus junction temperature(typical values).

