

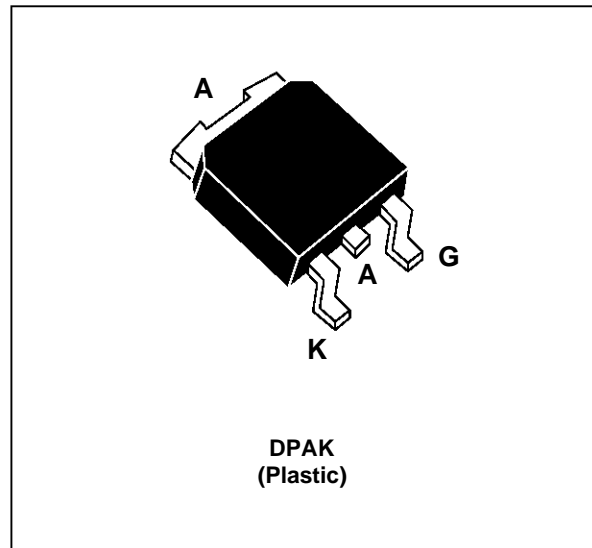


FEATURES

- $I_{TRMS} = 8\text{ A}$
- $V_{DRM} = 400\text{ V to }800\text{ V}$
- $I_{GT} \leq 5\text{ mA and }15\text{ mA}$

DESCRIPTION

The TN805/TN815-B serie of SCR uses a high performance TOPGLASS PNP technology. The parts are intended for general purpose applications using mount technology.



ABSOLUT MAXIMUM RATINGS

Symbol	Parameter	Value	Unit	
$I_{T(RMS)}$	RMS on-state current (180° conduction angle)	$T_c = 105\text{ °C}$ 8	A	
$I_{T(AV)}$	Mean on-state current (180° conduction angle)	$T_c = 105\text{ °C}$ 5	A	
I_{TSM}	Non repetitive surge peak on-state current (T_j initial = 25°C)	$t_p = 8.3\text{ ms}$	73	A
		$t_p = 10\text{ ms}$	70	
I^2t	I^2t value for fusing	$t_p = 10\text{ ms}$ 24.5	A ² s	
di/dt	Critical rate of rise of on-state current $I_G = 100\text{mA}$ $di_G/dt = 1\text{A}/\mu\text{s}$	100	A/ μs	
T_{stg}	Storage temperature range	- 40 to + 150	°C	
T_j	Operating junction temperature range	- 40 to + 125	°C	
T_l	Maximum lead temperature for soldering during 10 s	260	°C	

Symbol	Parameter	TN805 or TN815-				Unit
		400B	600B	700B	800B	
V_{DRM} V_{RRM}	Repetitive peak off-state voltage $T_j = 125\text{ °C}$	400	600	700	800	V

TN805/TN815-B

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
Rth (j-c)	Junction to case for DC	2.5	°C/W

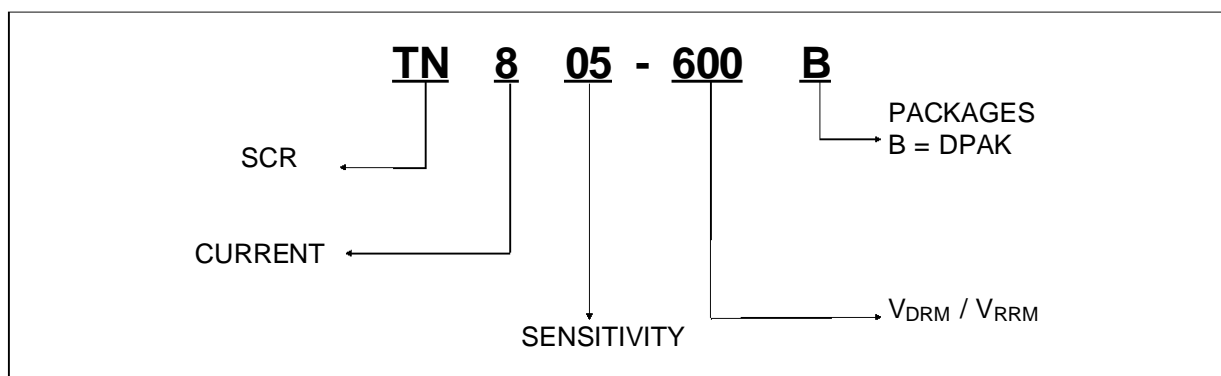
GATE CHARACTERISTICS (maximum values)

$P_{G(AV)} = 1 \text{ W}$ $P_{GM} = 10 \text{ W}$ ($t_p = 20 \mu\text{s}$) $I_{GM} = 4 \text{ A}$ ($t_p = 20 \mu\text{s}$) $V_{RGM} = 5 \text{ V}$

ELECTRICAL CHARACTERISTICS

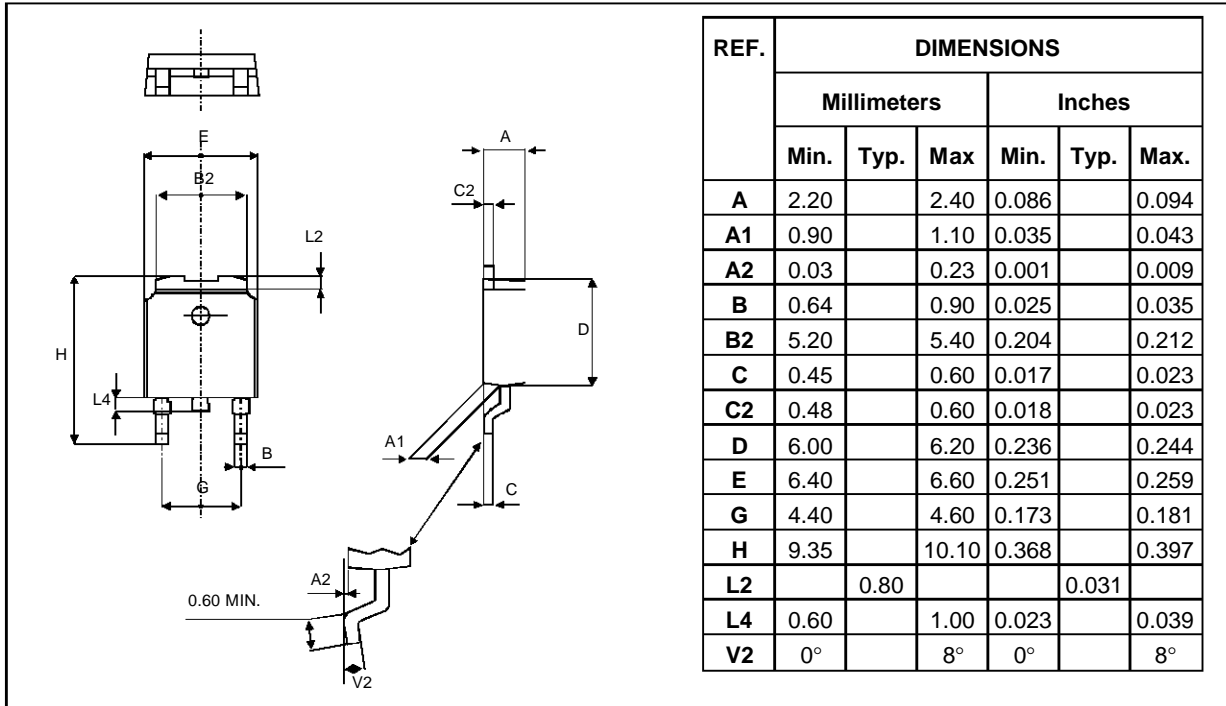
Symbol	Test Conditions		Value		Unit	
			TN805	TN835		
I_{GT}	$V_D=12\text{V}$ (DC) $R_L=33\Omega$	$T_j=25^\circ\text{C}$	MAX	5	15	mA
V_{GT}	$V_D=12\text{V}$ (DC) $R_L=33\Omega$	$T_j=25^\circ\text{C}$	MAX	1.5		V
V_{GD}	$V_D=V_{DRM}$ $R_L=3.3\text{k}\Omega$	$T_j=125^\circ\text{C}$	MIN	0.2		V
tgt	$V_D=V_{DRM}$ $I_G = 40\text{mA}$ $di_G/dt = 0.5\text{A}/\mu\text{s}$ $I_{TM} = 3 \times I_T(VA)$	$T_j=25^\circ\text{C}$	TYP	2		μs
I_L	$I_G=1.2 I_{GT}$	$T_j=25^\circ\text{C}$	MAX	50	100	mA
I_H	$I_T= 150\text{mA}$ gate open	$T_j=25^\circ\text{C}$	MAX	25	50	mA
V_{TM}	$I_{TM}= 16\text{A}$ $t_p= 380\mu\text{s}$	$T_j=25^\circ\text{C}$	MAX	1.6		V
I_{DRM} I_{RRM}	V_{DRM} Rated V_{RRM} Rated	$T_j=25^\circ\text{C}$	MAX	10		μA
		$T_j=125^\circ\text{C}$	MAX	2		mA
dV/dt	Linear slope up to $V_D=67\%V_{DRM}$ gate open	$T_j=125^\circ\text{C}$	MIN	50	100	V/ μs

ORDERING INFORMATION



PACKAGE MECHANICAL DATA

DPAK Plastic



MARKING : Type number

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