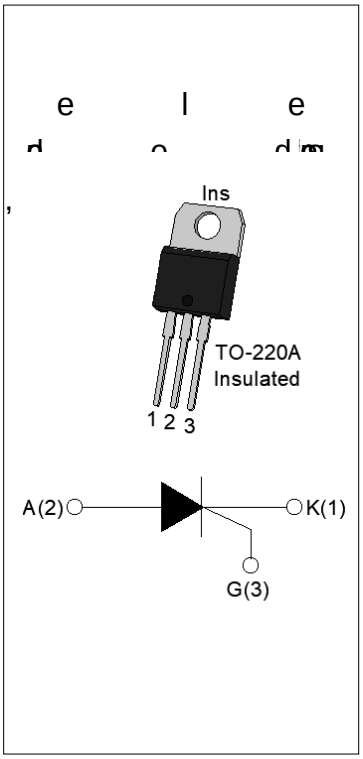
JCT825AH 25A SCR

Rev. A.1.1

DESCRIPTION:

With the advanced planar passivation technology, the JCT825AH SCR is suitable for high performance applications that require high commutation dV/dt and clean gate triggering. The logic level gate sensitivity allows direct triggering by microcontrollers and logic integrated circuits. The JCT825AH is available in TO-220A Insulated package which provides 2500 V_{RMS} isolation voltage and complies with UL standards (File Number: E326243). Pb-free lead plating and halogen free mold compound are also available.



MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	25	A
V_{DRM}/V_{RRM}	800	V
I_{GT}	20	mA

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	T_{stg}	-40-150	°C
Operating junction temperature range	T_j	-40-150	°C
Repetitive peak off-state voltage (T_j = 25°C)	V_{DRM}	800	V
Repetitive peak reverse voltage (T_j = 25°C)	V_{RRM}	800	V
Average on-state current (180° conduction angle)	$I_{T(AV)}$	16	A
RMS on-state current (180° conduction angle)	$I_{T(RMS)}$	25	A
Non repetitive surge peak on-state current (t_p = 10ms, T_j = 25°C)	I_{TSM}	320	A
Non repetitive surge peak on-state current (t_p = 8.3ms, T_j = 25°C)		352	
I^2t Value for fusing (t_p = 10ms, T_j = 25°C)	I^2t	512	A^2s
Critical rate of rise of on-state current (I_G = 2 × I_{GT}, t_r ≤ 100ns, T_j = 125°C)	dI/dt	150	A/μs
Peak gate current (t_p = 20μs, T_j = 150°C)	I_{GM}	5	A

Av e ag e (Tj gat) e	$P_{G(AV)}$	e 1 rdi	W =
P e ak gat e pw e	P_{GM} r	20	W
P s e e ak ag e (Tj ; n -r e -at p e e ;	V_p	0.5	k

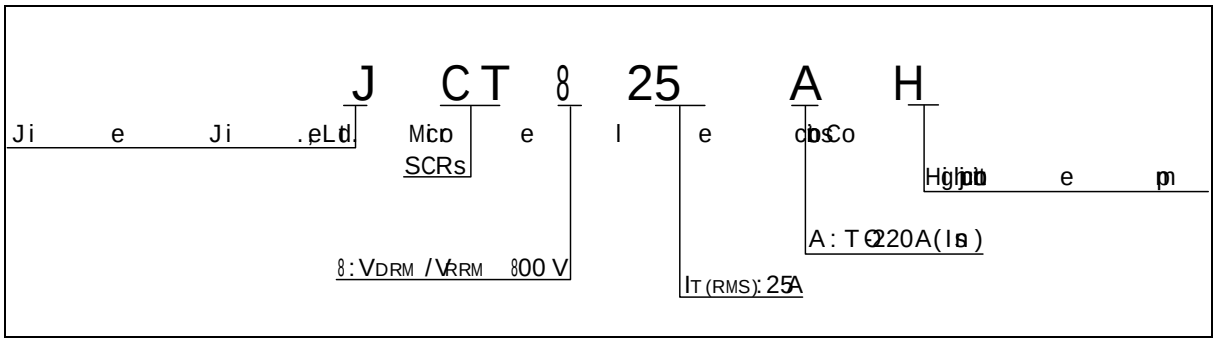
ELECTRICAL CHARACTERISTICS (Tj e s n e iw e = p

Symbol	b Test Conditions	Value MIN.	TYP.	MAX.	Unit
I_{GT}	V_D L	-	-	20 = =	m
V_{GT}		-	-	1	V
V_{GD}	V_D DRM Tj 50 R_L k	0.2	-	= - =	V =
I_L	I_G 1.2 I_{GT}	-	-	= 70	m
I_H	I_T 500mA	-	-	= 60	m
dV/dt	V_D 540V G at n Tj 125 Op	800	-	= -	V s =
	V_D 540V G at n Tj 150 Op	500	-	= -	=
t_g	I_G 0 A I_A 00 A I_R	-	2	= -	= s =
t_q	Tj	-	50	= -	

STATIC CHARACTERISTICS

Symbol	b Pa n	te Va .)	lue (MA X
V_{TM}	I_{TM} 50A t_p 380 s Tj	1.5 =	V =
V_{TO}	Th e s hold ag Tj e 50	0.7	V =
R_D	Dy mi r e s n Tj 50		=

ORDERING INFORMATION



MARKING

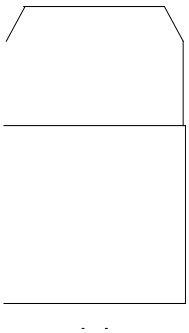


FIG.1: Maip v e rdpatv e s RMS o -at e cu e th t e pm e atu e

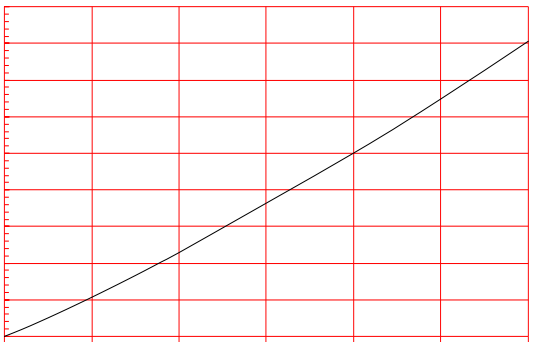
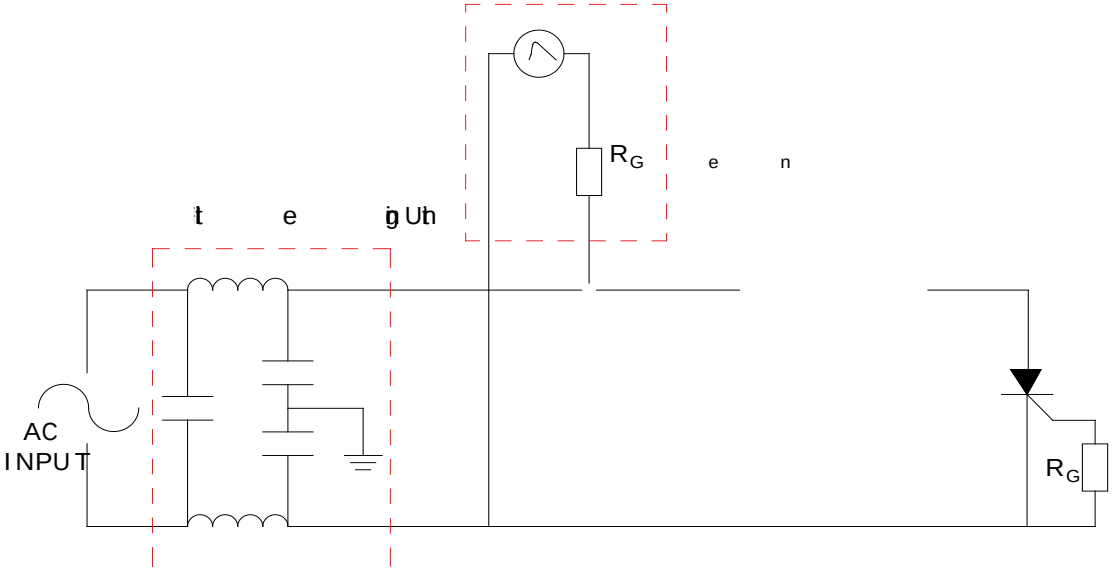


FIG.2: RMS o -at e cu e tv e

I G . 7 T e tscictidov e ad r -61e000-4-5 tadads e eds IEC

IEC61000-4-5 Stadads
Sg e G e n e ab



ORDERING INFORMATION

Ordec	Vba V_{DRM}/V_{RRM} (V)	IGT(An)	Pa	Ba (p	Dev ode
JCT825AH	800	20	TO-220A(Isa)	50	Tub e

Do Revi si d Hi sty

Dat e	R e i	Chag e s
Jn .15, 2023	A 1.0	Lat dat e
Oct .11, 2025	A 1.1	R PACKAGE MECHANICAL DATA

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