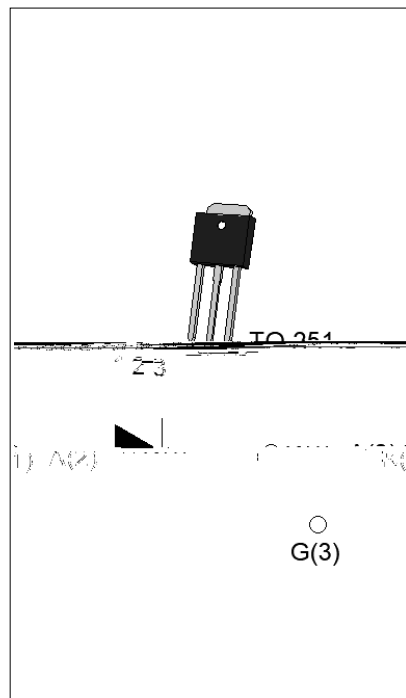




### DESCRIPTION:

With high ability to withstand the shock loading of large current, JCT812H of silicon controlled rectifiers provides high  $dV/dt$  rate with strong resistance to electromagnetic interference. It is especially recommended for use on solid state relay, motorcycle, power charger, T-tools etc. Package TO-251 is RoHS compliant.



### MAIN FEATURES

Symbol	Value	Unit
$I_{T(RMS)}$	12	A
$V_{DRM}/V_{RRM}$	800	V
$I_{GT}$	15	mA

### ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Unit
Storage junction temperature range	$T_{stg}$	-40-150	
Operating junction temperature range	$T_j$	-40-125	
Repetitive peak off-state voltage ( $T_j=25^\circ\text{C}$ )	$V_{DRM}$	800	V
Repetitive peak reverse voltage ( $T_j=25^\circ\text{C}$ )	$V_{RRM}$	800	V
Average on-state current ( $T_c=63^\circ\text{C}$ )	$I_{T(AV)}$	7.6	A
RMS on-state current ( $T_c=63^\circ\text{C}$ )	$I_{T(RMS)}$	12	A
Non repetitive surge peak on-state current ( $t_p=10\text{ms}, T_j=25^\circ\text{C}$ )	$I_{TSM}$	140	A
Non repetitive surge peak on-state current ( $t_p=8.3\text{ms}, T_j=25^\circ\text{C}$ )		154	
$I^2t$ value for fusing ( $t_p=10\text{ms}, T_j=25^\circ\text{C}$ )	$I^2t$	98	$\text{A}^2\text{s}$
Critical rate of rise of on-state current ( $I_G=2 I_{GT}, f=100\text{Hz}, T_j=125^\circ\text{C}$ )	$di/dt$	150	$\text{A}/\mu\text{s}$
Peak gate current ( $t_p=20\mu\text{s}, T_j=125^\circ\text{C}$ )	$I_{GM}$	4	A

Average gate power dissipation ( $T_j=125$ )	$P_{G(AV)}$	1	W
Peak gate power	$P_{GM}$	10	W
Peak pulse voltage ( $T_j=25$ ; non-repetitive, off-state; FIG.7)	$V_{pp}$	0.5	kV

**ELECTRICAL CHARACTERISTICS** ( $T_j=25$  unless otherwise specified)

Symbol	Test Condition	Value			Unit
		MIN.	TYP.	MAX.	
$I_{GT}$	$V_D=12V$ $R_L=33$	-	-	15	mA
$V_{GT}$		-	-	1	V
$V_{GD}$	$V_D=V_{DRM}$ $T_j=125$ $R_L=3.3k$	0.2	-	-	V
$I_L$	$I_G=1.2I_{GT}$	-	-	60	mA
$I_H$	$I_T=500mA$	-	-	50	mA
dV/dt	$V_D=540V$ Gate Open $T_j=125$	500	-	-	V/ $\mu s$
$t_{on}$	$I_G=20mA$ $I_A=200mA$ $I_R=20mA$ $T_j=25$	-	5	-	$\mu s$
$t_{off}$		-	80	-	

**STATIC CHARACTERISTICS**
**20**

**JCT812H**

 **JieJie Microelectronics Co., Ltd.**

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**ORDERING INFORMATION**

# JCT812H

**FIG.1:** Maximum power dissipation versus RMS on-state current



**FIG.2:** RMS on-state current versus case temperature



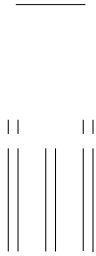
**ORDERING INFORMATION**

<b>Order code</b>	<b>Voltage <math>V_{DRM}/V_{RRM}</math> (V)</b>	<b>IGT(mA)</b>	<b>Package</b>	<b>Base qty. (pcs)</b>	<b>Delivery mode</b>
<b>JCT812H</b>	<b>800</b>	<b>15</b>	<b>TO-251</b>	<b>80</b>	<b>Tube</b>

**Document Revision History**

<b>Date</b>	<b>Revision</b>	<b>Changes</b>
Apr.13, 2023	A.1.0	Last update
Oct.16, 2025	A.1.1	Revise PACKAGE MECHANICAL DATA

**PACKAGE MECHANICAL DATA**



**JCT812H**

**Jie**