

# SLA5201

IGBT

## 絶対最大定格

(Ta = 25 )

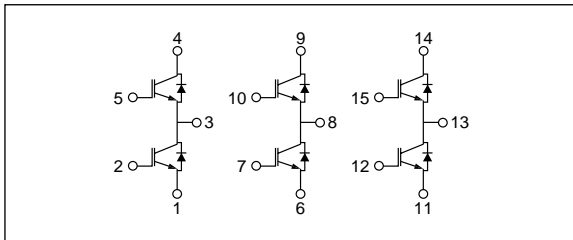
記号	定格	単位
V <sub>CES</sub>	600	V
V <sub>GE</sub>	±20	V
I <sub>c(DC)</sub>	7 (Ta = 25 )	A
I <sub>c(pulse)</sub>	±21 (PW 1ms, duty 1%)	A
I <sub>F</sub>	7 (Ta = 25 )	A
I <sub>FP</sub>	21	A
P <sub>T</sub>	5 (Ta = 25 , 全回路動作, No Fin)	W
	60 (Tc = 25 , 全回路動作, Fin)	W
j-a	25 (接合 - 外気間, Ta = 25 , 全回路動作)	/W
j-c	2.08 (接合 - ケース間, Tc = 25 , 全回路動作)	/W
T <sub>J</sub>	150	
T <sub>stg</sub>	-40 ~ +150	

## 電気的特性

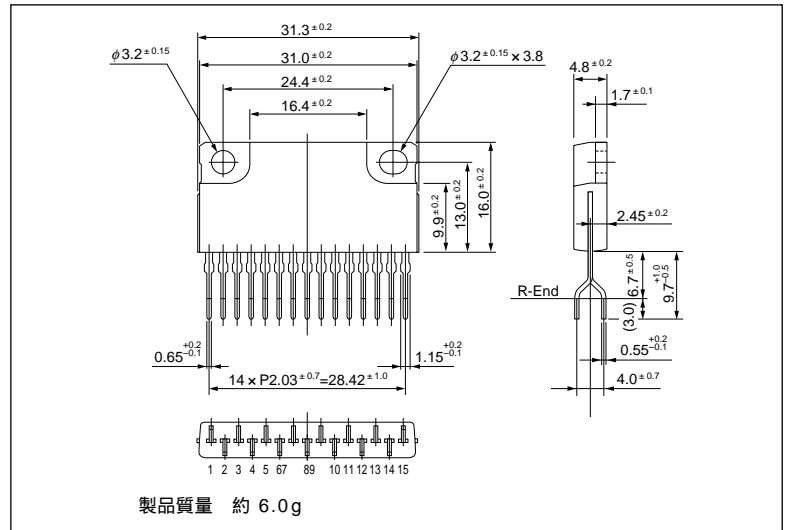
(Ta = 25 )

記号	規格値			単位	条件
	min	typ	max		
V <sub>(BR)CES</sub>	600			V	I <sub>c</sub> = 250 μA, V <sub>GE</sub> = 0V
I <sub>GES</sub>			±100	nA	V <sub>GE</sub> = ±20V
I <sub>CES</sub>			250	μA	V <sub>CE</sub> = 600V, V <sub>GE</sub> = 0V
V <sub>GE(th)</sub>	4.0		8.0	V	V <sub>CE</sub> = 10V, I <sub>D</sub> = 1mA
V <sub>CE(sat)</sub>		1.4		V	V <sub>GE</sub> = 15V, I <sub>c</sub> = 3.5A
		1.85	2.2	V	V <sub>GE</sub> = 15V, I <sub>c</sub> = 7A
g <sub>fs</sub>		4.2		S	V <sub>CE</sub> = 10V, I <sub>c</sub> = 7A
C <sub>ies</sub>		350		pF	V <sub>CE</sub> = 25V
C <sub>oes</sub>		70		pF	f = 1.0MHz
C <sub>res</sub>		20		pF	V <sub>GE</sub> = 0V
td(on)		45		ns	I <sub>c</sub> = 7A
tr		90		ns	V <sub>CE</sub> = 400V
td(off)		200		ns	R <sub>G</sub> = 50
tf		175		ns	V <sub>GE</sub> = 15V
Q <sub>g</sub>		20		nC	I <sub>c</sub> = 7A
Q <sub>gs</sub>		4		nC	V <sub>CE</sub> = 400V
Q <sub>gd</sub>		10		nC	V <sub>GE</sub> = 15V
V <sub>F</sub>		1.6	2.4	V	I <sub>F</sub> = 7A, V <sub>GE</sub> = 0V
t <sub>rr</sub>		50		ns	I <sub>F</sub> = 7A, V <sub>GE</sub> = 0V, di/dt = 100A/μs
Q <sub>rr</sub>		55		nC	I <sub>F</sub> = 7A, V <sub>GE</sub> = 0V, di/dt = 100A/μs

## 等価回路図

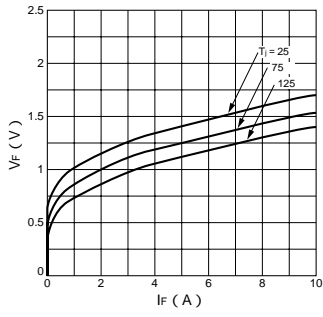


## 外形図

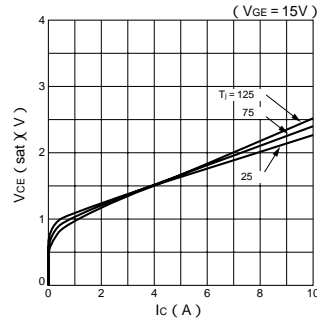


## 特性曲線

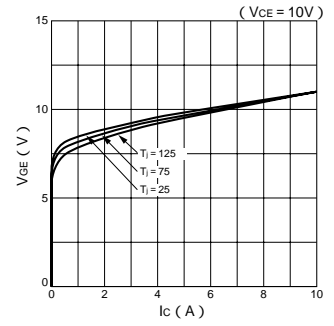
V<sub>F</sub>-I<sub>F</sub>特性 (代表例)



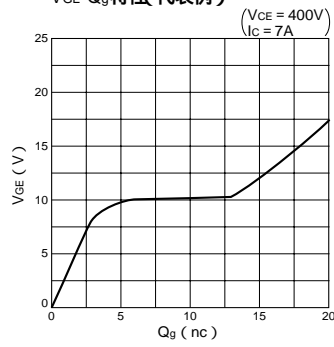
V<sub>CE(sat)</sub>-I<sub>C</sub>特性 (代表例)



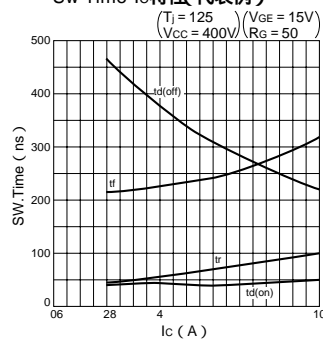
V<sub>GE</sub>-I<sub>C</sub>特性 (代表例)



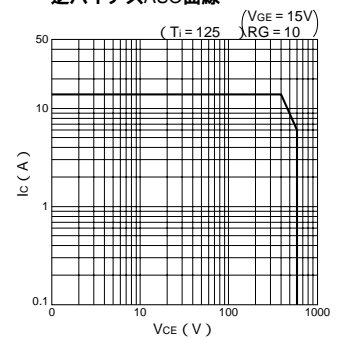
V<sub>GE</sub>-Q<sub>g</sub>特性 (代表例)



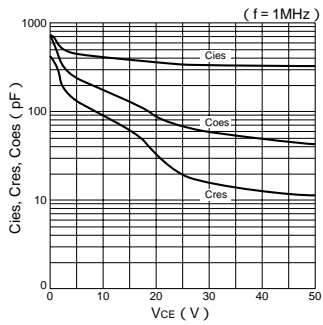
Sw Time-I<sub>C</sub>特性 (代表例)



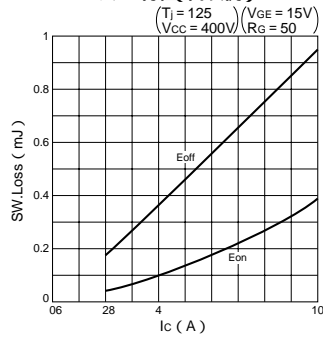
逆バイアスASO曲線



Capacitance-V<sub>CE</sub>特性 (代表例)



Swロス-I<sub>C</sub>特性 (代表例)



i-c-PW特性

