

### Absolute maximum ratings

(Ta=25°C)

Symbol	Specification	Unit
V <sub>CB0</sub>	120	V
V <sub>CEO</sub>	120	V
V <sub>EBO</sub>	6	V
I <sub>C</sub>	4	A
I <sub>CP</sub>	6 (PW≤1ms, Du≤50%)	A
I <sub>B</sub>	0.5	A
I <sub>F</sub>	4 (PW≤0.5ms, Du≤25%)	A
I <sub>FSM</sub>	6 (PW≤10ms, Single)	A
V <sub>R</sub>	120	V
P <sub>T</sub>	5 (Ta=25°C) 25 (Tc=25°C)	W
V <sub>ISO</sub>	1000 (Between fin and lead pin, AC)	V <sub>rms</sub>
T <sub>j</sub>	150	°C
T <sub>stg</sub>	-40 to +150	°C
θ <sub>j-c</sub>	5	°C/W

### Electrical characteristics

(Ta=25°C)

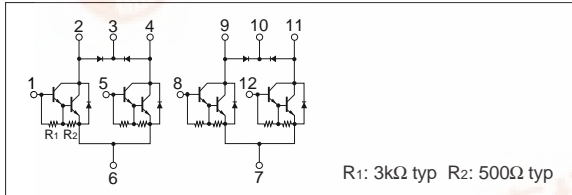
Symbol	Specification			Unit	Conditions
	min	typ	max		
I <sub>CBO</sub>			10	μA	V <sub>CB</sub> =120V
I <sub>EBO</sub>			10	mA	V <sub>EB</sub> =6V
V <sub>CEO</sub>	120			V	I <sub>C</sub> =25mA
h <sub>FE</sub>	2000	5000	15000		V <sub>CE</sub> =2V, I <sub>C</sub> =2A
V <sub>CE</sub> (sat)		1.0	1.5	V	I <sub>C</sub> =2A, I <sub>B</sub> =2mA
V <sub>BE</sub> (sat)		1.6	2.0	V	
t <sub>on</sub>		0.6		μs	V <sub>CC</sub> ≐40V,
t <sub>stg</sub>		5.0		μs	I <sub>C</sub> =2A,
t <sub>f</sub>		2.0		μs	I <sub>B1</sub> =-I <sub>B2</sub> =10mA

### Diode for flyback voltage absorption

(Ta=25°C)

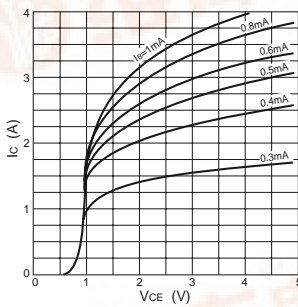
Symbol	Specification			Unit	Conditions
	min	typ	max		
V <sub>R</sub>	120			V	I <sub>R</sub> =10μA
V <sub>F</sub>			1.2	V	I <sub>F</sub> =1A
I <sub>R</sub>			10	μA	V <sub>R</sub> =120V
t <sub>rr</sub>		100		ns	I <sub>F</sub> =±100mA

### Equivalent circuit diagram

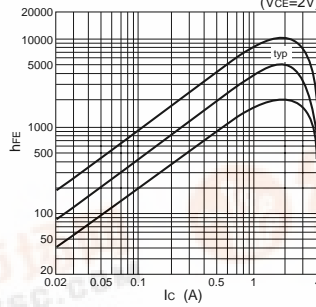


### Characteristic curves

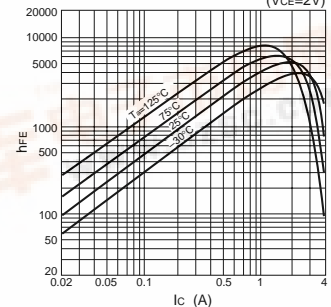
I<sub>C</sub>-V<sub>CE</sub> Characteristics (Typical)



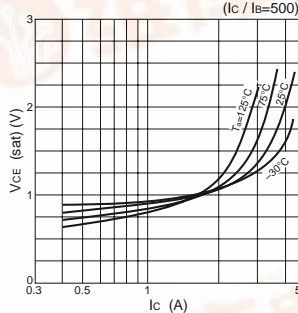
h<sub>FE</sub>-I<sub>C</sub> Characteristics (Typical)



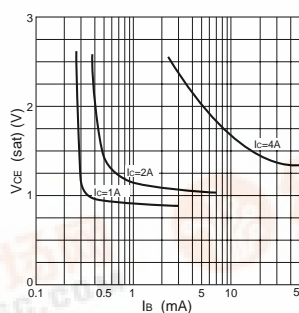
h<sub>FE</sub>-I<sub>C</sub> Temperature Characteristics (Typical)



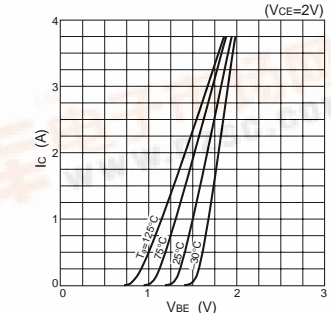
V<sub>CE</sub>(sat)-I<sub>C</sub> Temperature Characteristics (Typical)



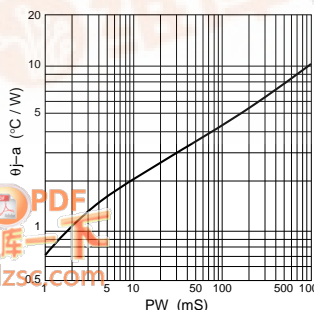
V<sub>CE</sub>(sat)-I<sub>B</sub> Characteristics (Typical)



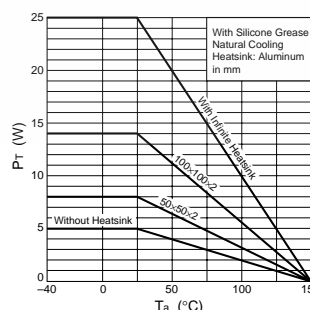
I<sub>C</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)



θ<sub>j-a</sub>-PW Characteristics



P<sub>T</sub>-T<sub>a</sub> Characteristics



Safe Operating Area (SOA)

