

◆Si APN

◆RoHS COMPLIANT

1. APPLICATION

Fluorescent Lamp、Electronic Ballast、
and Switch-mode power supplies

2. FEATURES

- High voltage capability
- Intergrated antiparallel collector-emitter diode
- Features of good high temperature
- High switching speed

3. PACKAGE

TO-220

4. Electrical Characteristics

4.1 Absolute Maximum Ratings

$T_{amb}=25^{\circ}\text{C}$ unless specified

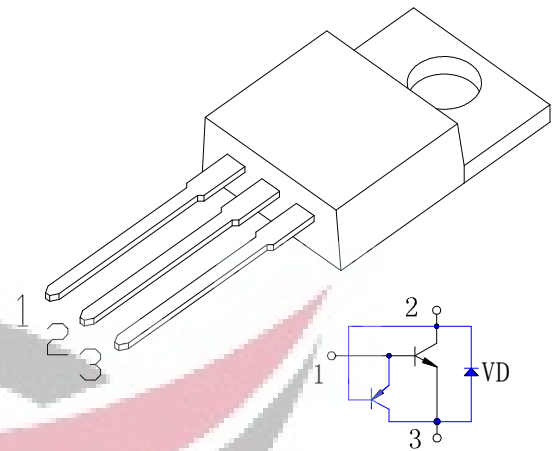
PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	650	V
Collector-Emitter Voltage	V_{CEO}	400	V
Emittor- Base Voltage	V_{EBO}	9	V
Collector Current	I_C	2.0	A
Power Dissipation	P_{tot}	$T_a=25^{\circ}\text{C}$	2
		$T_c=25^{\circ}\text{C}$	28
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55~150	$^{\circ}\text{C}$

4.2 Electrical Parameter

$T_{amb}=25^{\circ}\text{C}$ unless specified

PARAMETER	SYMBOL	TEST CONDITION	VALUE			UNIT
			MIN	TYP	MAX	
Collector-Base Voltage	BV_{CBO}	$I_C=1\text{mA}, I_E=0$	650			V
Collector-Emitter Voltage	BV_{CEO}	$I_C=1\text{mA}, I_B=0$	400			V
Emittor-Base Voltage	BV_{EBO}	$I_E=1\text{mA}, I_C=0$	9			V
Collector-Base Cutoff Current	I_{CBO}	$V_{CB}=650\text{V}, I_E=0$			10	μA
Collector-Emitter Cutoff Current	I_{CEO}	$V_{CE}=400\text{V}, I_B=0$			20	μA
Emittor-Base Cutoff Current	I_{EBO}	$V_{EB}=9\text{V}, I_C=0$			10	μA
DC Current Gain	h_{FE}^*	$V_{CE}=5\text{V}, I_C=1\text{mA}$	8			
		$V_{CE}=5\text{V}, I_C=200\text{mA}$	15		30	
Collector-Emitter Saturation Voltage	$V_{CE\text{ sat}}^*$	$I_C=1\text{A}, I_B=0.5\text{A}$			0.6	V
Base-Emittor Saturation Voltage	$V_{BE\text{ sat}}^*$	$I_C=1\text{A}, I_B=0.5\text{A}$			1.2	V
Rising Time	t_r	$I_C=250\text{mA}$ (UI9600)			0.5	μs
Falling Time	t_f				0.5	μs
Storage Time	t_s		2.1		3.3	μs
Typical Frequency	f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=1\text{MHz}$	5			MHz

*: Pulse test $t_p \leq 300\mu\text{s}, \delta \leq 2\%$



1 Base(B) 2 Collector(C) 3 Emitter(E)

5. Characteristic Curve

Fig1 SOA (DC)

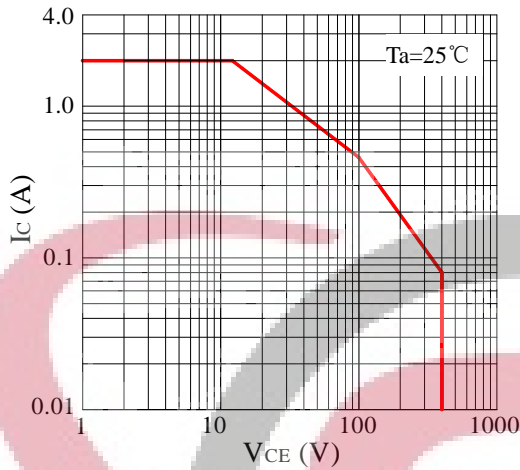


Fig2 Ptot - T

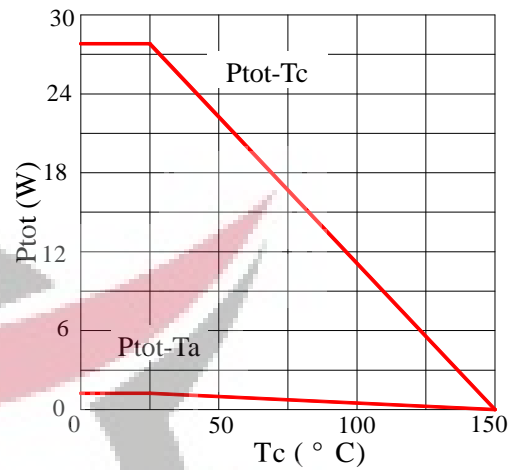


Fig3 Static Characteristic

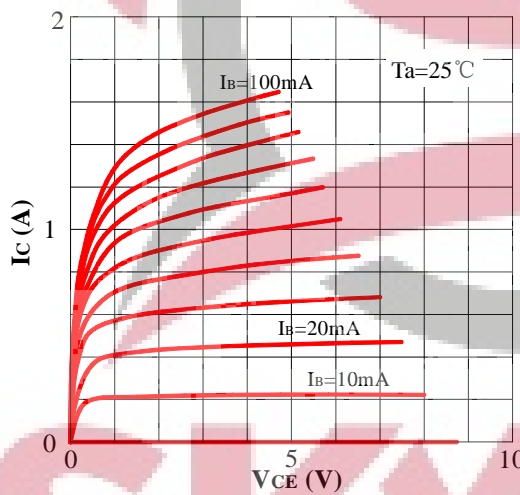


Fig4 hFE-Ic

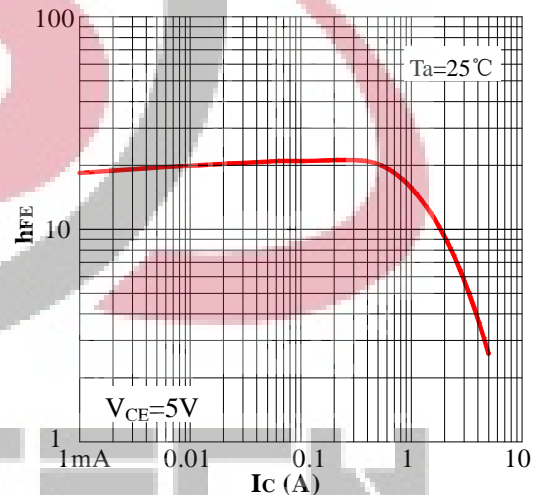


Fig5 VCESat-Ic

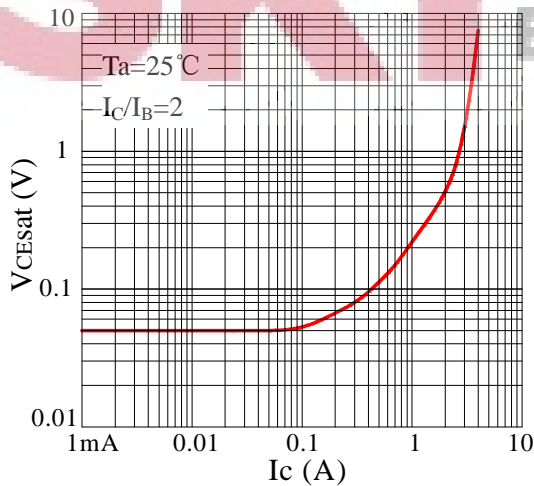
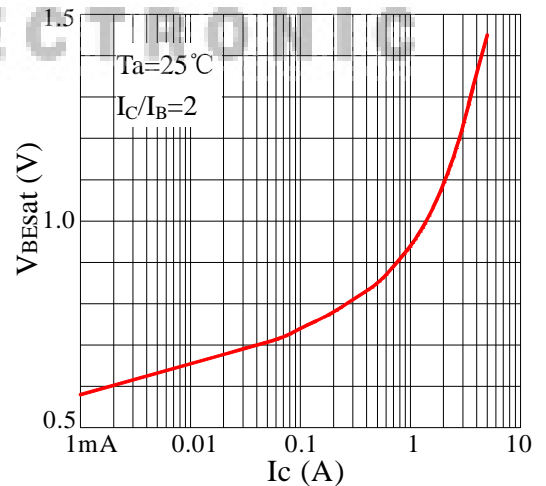


Fig6 VBESat-Ic



6. Package Dimentions(Unit: mm)

T0-220

