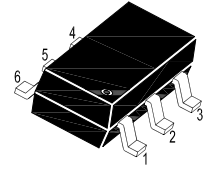
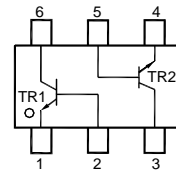


■ **NPN Silicon Epitaxial Planar Transistors**  
for high voltage amplifier applications.



1. Emitter 2. Base 3. Collector  
4. Emitter 5. Base 6. Collector

■ **Simplified outline(SOT-363)**

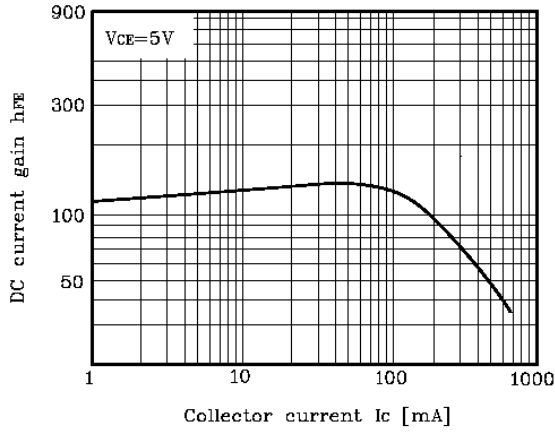
■ **Absolute Maximum Ratings (T<sub>a</sub> = 25°C)**

Parameter	Symbol	Value	Unit
Collector Base Voltage	V <sub>CBO</sub>	180	V
Collector Emitter Voltage	V <sub>CEO</sub>	160	V
Emitter Base Voltage	V <sub>EBO</sub>	6	V
Collector Current	I <sub>C</sub>	600	mA
Power Dissipation	P <sub>tot</sub>	200	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	- 55 to + 150	°C

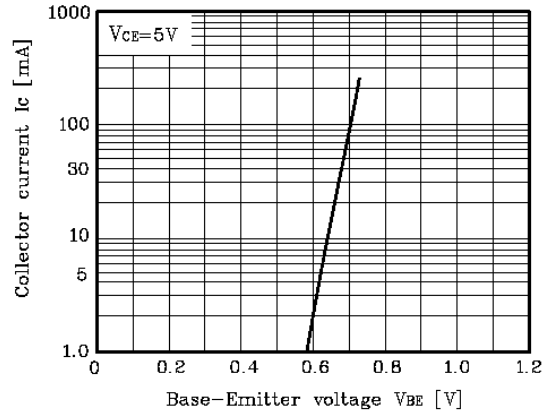
■ **Characteristics at T<sub>amb</sub>=25°C**

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at V <sub>CE</sub> = 5 V, I <sub>C</sub> = 1 mA	h <sub>FE</sub>	80	-	-
at V <sub>CE</sub> = 5 V, I <sub>C</sub> = 10 mA	h <sub>FE</sub>	80	250	-
at V <sub>CE</sub> = 5 V, I <sub>C</sub> = 50 mA	h <sub>FE</sub>	30	-	-
Collector Base Cutoff Current at V <sub>CB</sub> = 120 V	I <sub>CBO</sub>	-	50	nA
Emitter Base Cutoff Current at V <sub>EB</sub> = 4 V	I <sub>EBO</sub>	-	50	nA
Collector Base Breakdown Voltage at I <sub>C</sub> = 100 μA	V <sub>(BR)CBO</sub>	180	-	V
Collector Emitter Breakdown Voltage at I <sub>C</sub> = 1 mA	V <sub>(BR)CEO</sub>	160	-	V
Emitter Base Breakdown Voltage at I <sub>E</sub> = 10 μA	V <sub>(BR)EBO</sub>	6	-	V
Collector Emitter Saturation Voltage at I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA	V <sub>CE(sat)</sub>	-	0.15	V
at I <sub>C</sub> = 50 mA, I <sub>B</sub> = 5 mA		-	0.2	
Base Emitter Saturation Voltage at I <sub>C</sub> = 10 mA, I <sub>B</sub> = 1 mA	V <sub>BE(sat)</sub>	-	1	V
at I <sub>C</sub> = 50 mA, I <sub>B</sub> = 5 mA		-	1	
Gain Bandwidth Product at V <sub>CE</sub> = 10 V, I <sub>C</sub> = 10 mA, f = 100 MHz	f <sub>T</sub>	100	300	MHz
Collector Base Capacitance at V <sub>CB</sub> = 10 V, f = 1 MHz	C <sub>cbo</sub>	-	6	pF

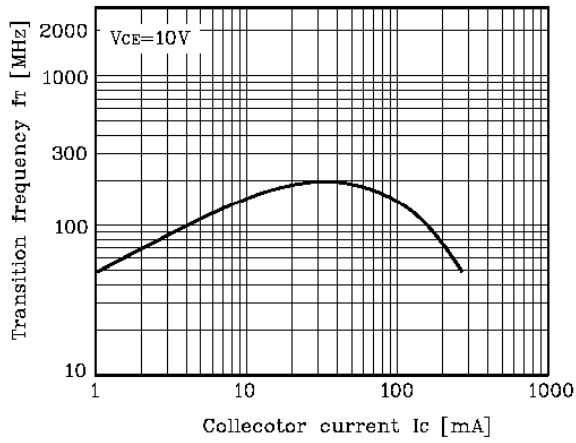
**Fig. 1  $h_{FE} - I_C$**



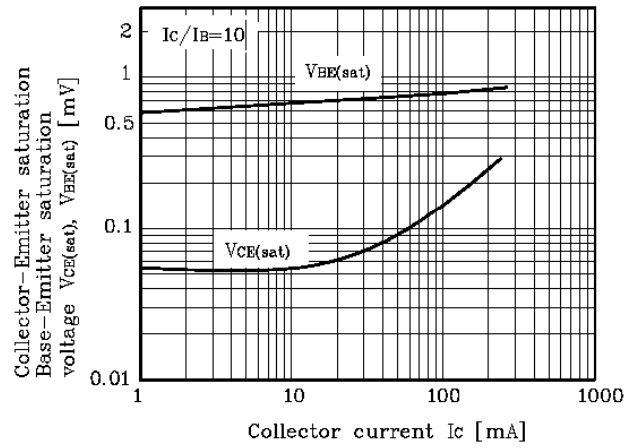
**Fig. 2  $I_C - V_{BE}$**



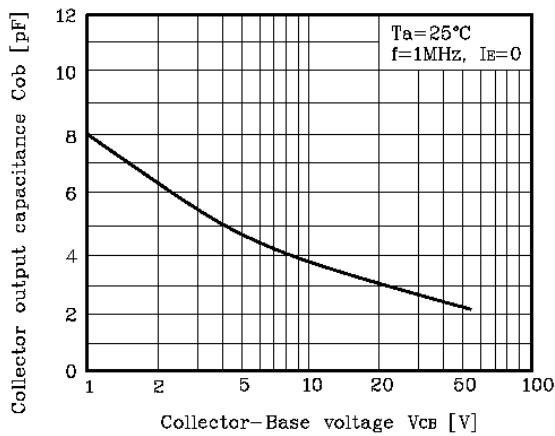
**Fig. 3  $f_T - I_C$**



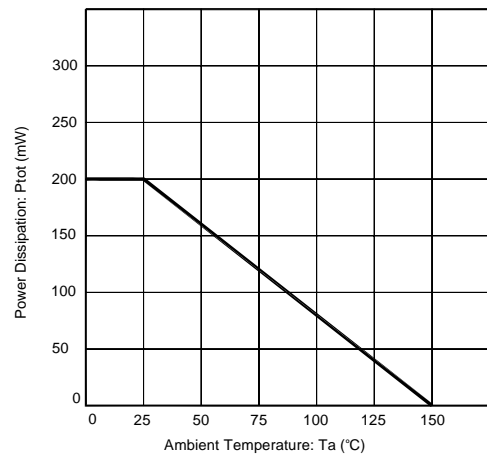
**Fig. 4  $V_{CE(sat)}, V_{BE(sat)} - I_C$**



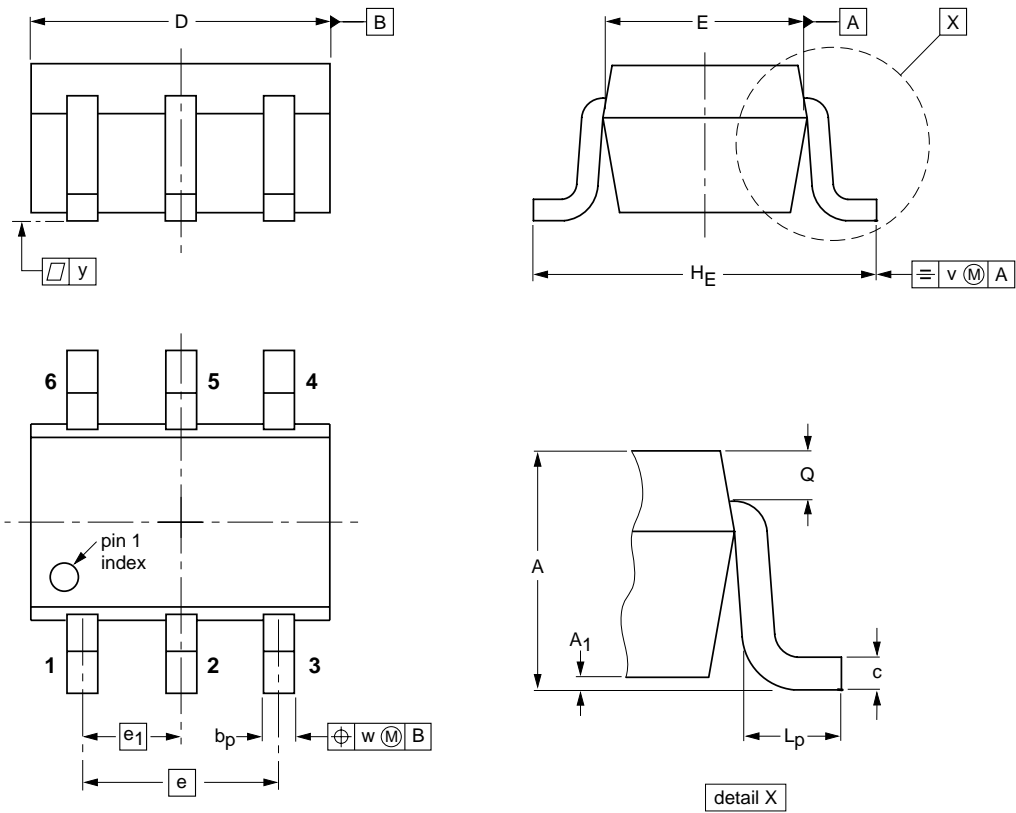
**Fig. 5  $C_{ob} - V_{CB}$**



**Fig. 6  $P_{tot} - T_a$**



Package Outline SOT-363



DIMENSIONS (mm are the original dimensions)

UNIT	A	A <sub>1</sub> max	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>E</sub>	L <sub>p</sub>	Q	v	w	y
mm	1.1 0.8	0.1	0.30 0.20	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.25 0.15	0.2	0.2	0.1

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-363	Tape/Reel, 7" reel	3000	EIA-481-1