



**2SC3303-O**  
**2SC3303-Y**

**NPN**  
**Plastic-Encapsulate**  
**Transistors**

**Features**

- Low Collector Saturation Voltage
- High Speed Switching Time
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"
- Thermal Resistance from junction to ambient:125°C/W

**Maximum Ratings**

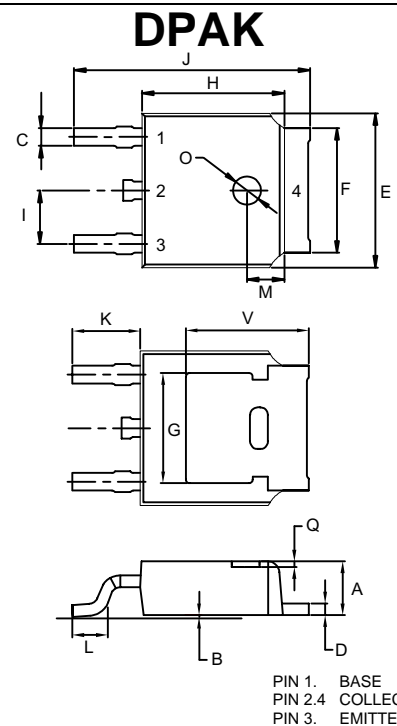
Symbol	Rating	Rating	Unit
V <sub>CEO</sub>	Collector-Emitter Voltage	80	V
V <sub>CBO</sub>	Collector-Base Voltage	100	V
V <sub>EBO</sub>	Emitter-Base Voltage	7.0	V
I <sub>C</sub>	Collector Current	5	A
P <sub>C</sub>	Collector power dissipation	1.0	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>STG</sub>	Storage Temperature	-55 to +150	°C

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

Symbol	Parameter	Min	Typ	Max	Units
V <sub>(BR)CBO</sub>	Collector-base Breakdown Voltage (I <sub>C</sub> =100µAdc, I <sub>E</sub> =0)	100	---	---	Vdc
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage (I <sub>C</sub> =100mAdc, I <sub>B</sub> =0)	80	---	---	Vdc
V <sub>(BR)EBO</sub>	Emitter-base Breakdown Voltage (I <sub>E</sub> =100µAdc, I <sub>C</sub> =0)	7	---	---	Vdc
I <sub>CBO</sub>	Collector-Base Cutoff Current (V <sub>CB</sub> =100Vdc, I <sub>E</sub> =0)	---	---	1.0	µAdc
I <sub>EBO</sub>	Emitter-Base Cutoff Current (V <sub>EB</sub> =7Vdc, I <sub>C</sub> =0)	---	---	1.0	µAdc
h <sub>FE</sub>	DC Current Gain (I <sub>C</sub> =1Adc, V <sub>CE</sub> =1.0Vdc) (I <sub>C</sub> =3Adc, V <sub>CE</sub> =1.0Vdc)	70	---	240	---
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage (I <sub>C</sub> =3Adc, I <sub>B</sub> =150mAdc)	---	---	0.4	Vdc
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage (I <sub>C</sub> =3Adc, I <sub>B</sub> =150mAdc)	---	---	1.2	Vdc
f <sub>T</sub>	Transition Frequency (V <sub>CE</sub> =4Vdc, I <sub>C</sub> =1Adc)	---	20	---	MHz
C <sub>ob</sub>	Collector output capacitance (V <sub>CB</sub> =10Vdc, I <sub>E</sub> =0, f=1.0MHz)	---	80	---	pF

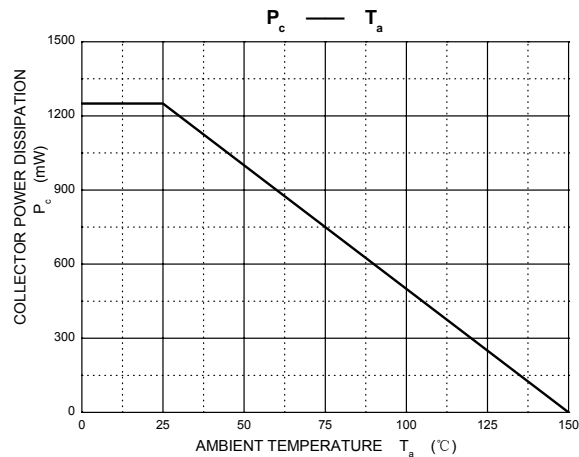
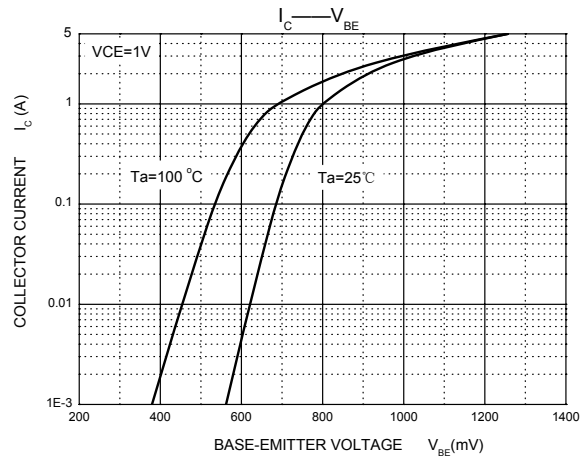
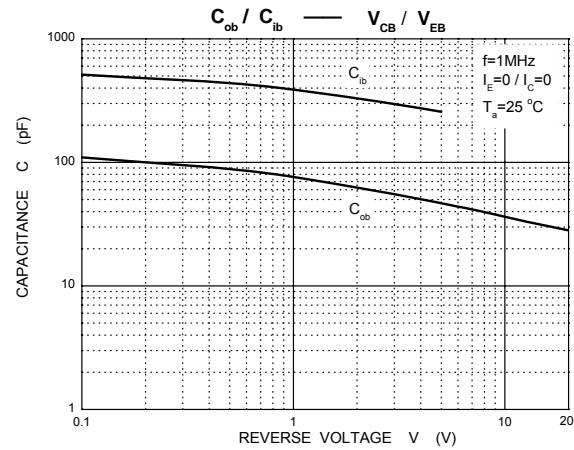
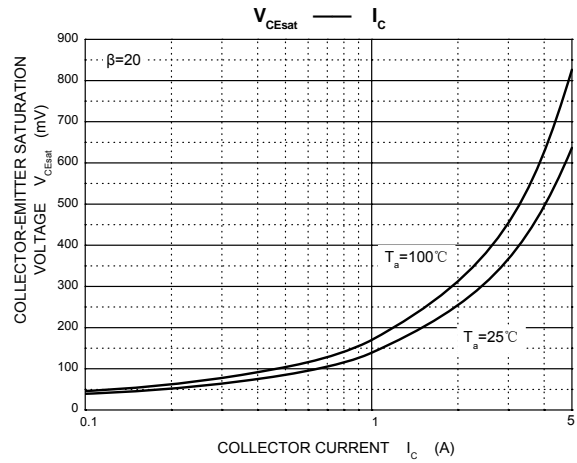
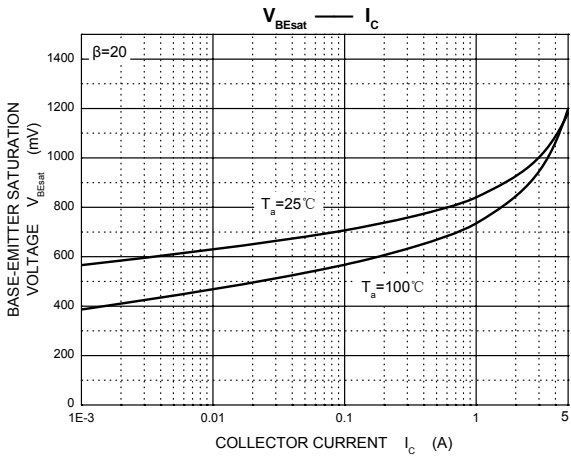
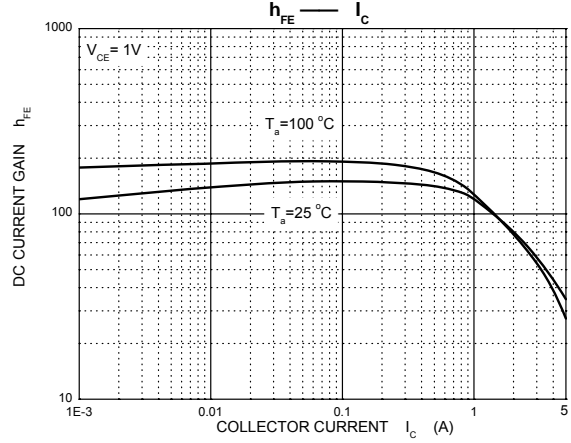
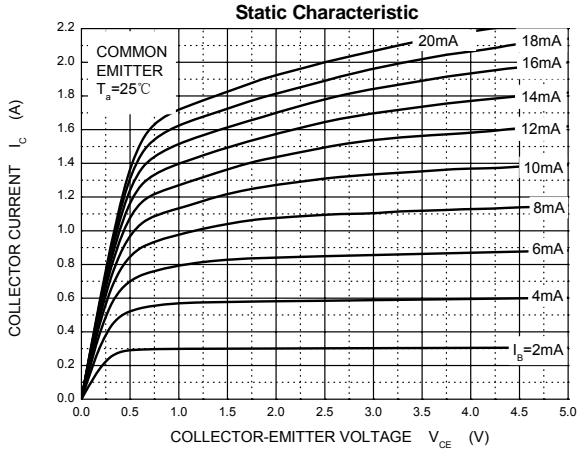
**CLASSIFICATION OF H<sub>FE</sub>(T)**

Rank	O	Y
Range	70-140	120-240



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		

# Typical Characteristics





**Ordering Information :**

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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