

Silicon NPN Epitaxial Type

2SC2983

FEATURES

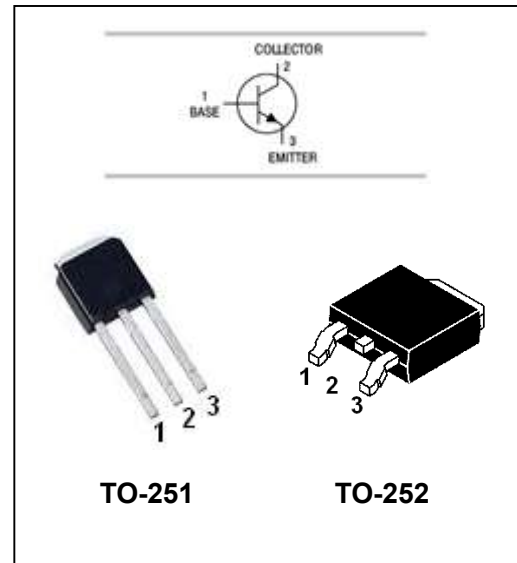
- High transition frequency: $f_T=100\text{MHz}(\text{typ})$.
- Complementary to 2SA1225.



Lead-free

APPLICATIONS

- Power Amplifier Applications.
- Driver Stage Amplifier Applications.



MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	160	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1.5	A
I_B	Base Current	0.3	A
P_C	Collector Power Dissipation	1	W
T_j, T_{stg}	Junction and Storage temperature range	-55 to +150	°C

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ELECTRICAL CHARACTERISTICS@ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-emitter breakdown voltage	V_{CEO}	$I_C=10mA, I_B=0$	160			V
Emitter-base breakdown voltage	V_{EBO}	$I_E=1mA, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=160V, I_E=0$			1.0	μA
Emitter cut-off current	I_{EBO}	$V_{EBO}=5V, I_C=0$			1.0	μA
DC current gain	h_{FE}	$V_{CE}=5V, I_C=100mA$	70		240	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=0.5A, I_B=0.05A$			1.5	V
Base-emitter voltage	V_{BE}	$V_{CE}=5V, I_C=0.5A$			1.0	V
Transition frequency	f_T	$V_{CE}=10V, I_C=100mA$		100		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		25		pF

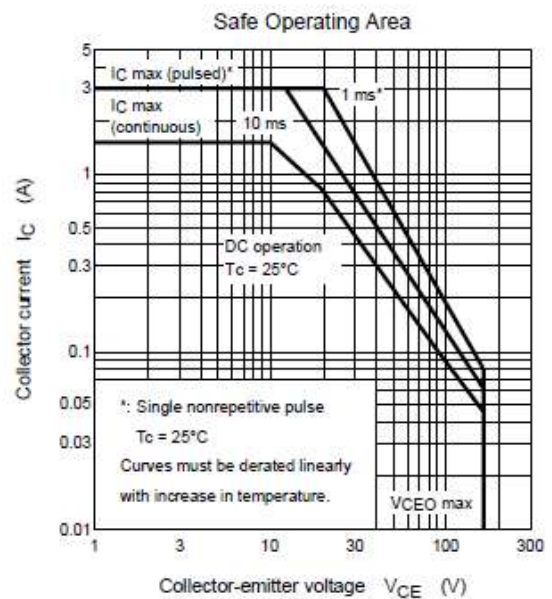
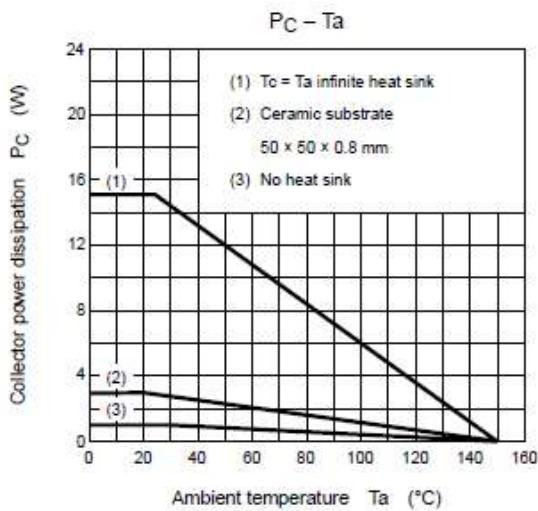
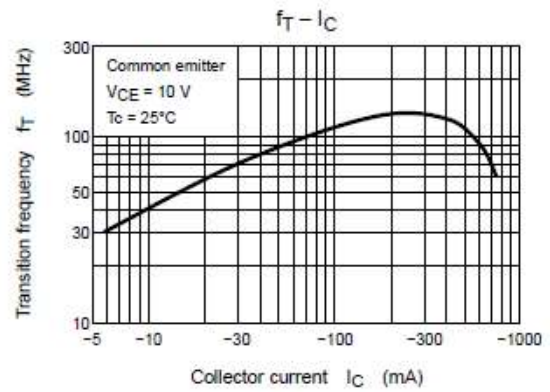
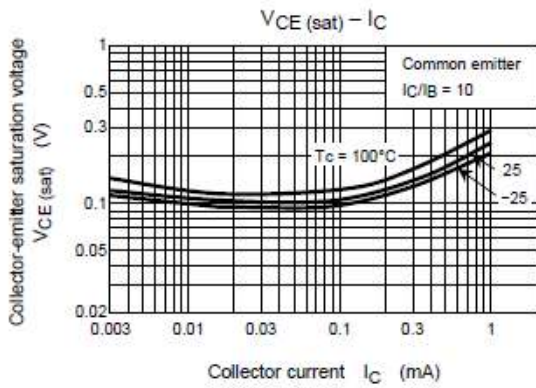
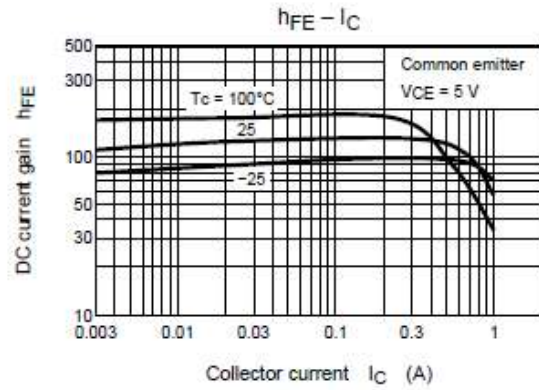
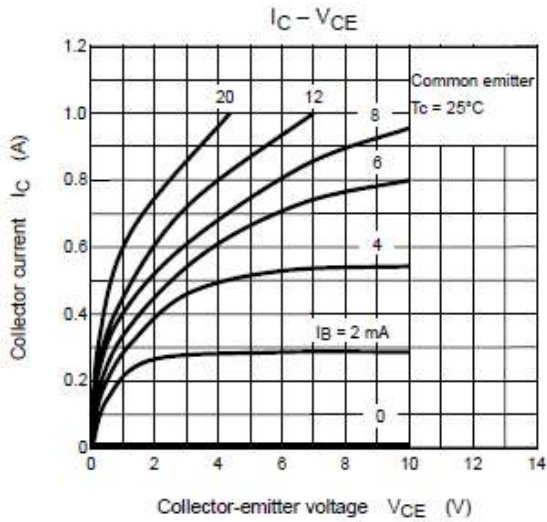
CLASSIFICATION OF $h_{FE(1)}$

Rank	O	Y
Range	70-140	120-240

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



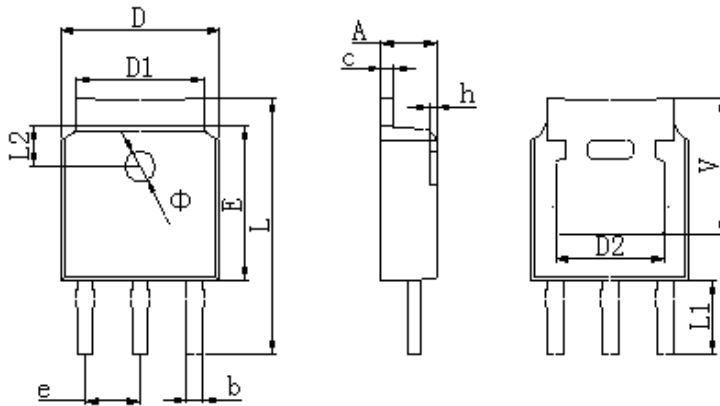
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PACKAGE OUTLINE

Plastic surface mounted package

TO-251

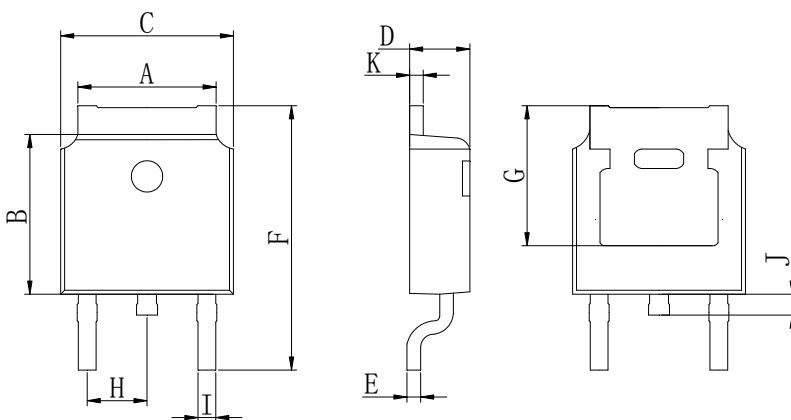


TO-251		
A	2.200	2.400
b	0.500	0.700
c	0.460	0.580
D	6.500	6.700
D1	5.100	5.460
D2	4.830 Typ.	
E	6.000	6.200
e	2.186	2.386
L	12.000	12.600
L1	5.100 Typ.	
L2	1.400	1.700
Φ	1.100	1.300
h	0.000	0.300
V	5.350 Typ.	
All Dimensions in mm		

PACKAGE OUTLINE

Plastic surface mounted package

TO-252

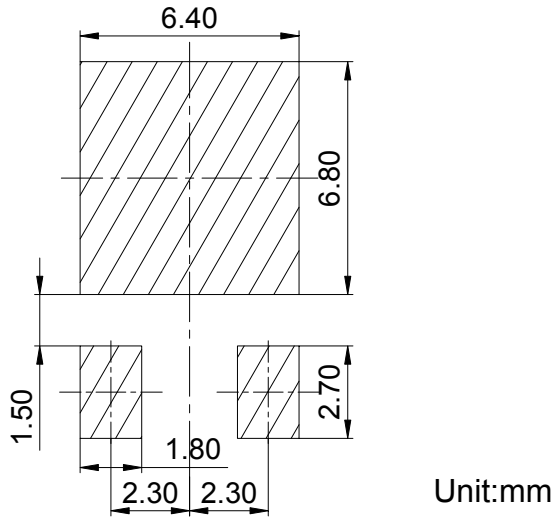


TO-252		
A	4.95	5.59
B	5.40	6.63
C	6.05	7.10
D	2.20	2.40
E	0.40	0.61
F	8.80	10.60
G	5.35 Typ.	
H	1.98	2.59
I	0.50	0.90
J	0.50	1.20
K	0.45	0.89
All Dimensions in mm		

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SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
2SC2983	TO-251/252	80PCS/Tube
	TO-252	2500PCS/Tape&Reel