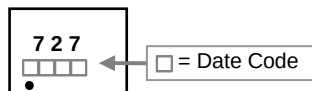


RoHS Compliant Product
A suffix of "-C" specifies halogen and lead free

FEATURES

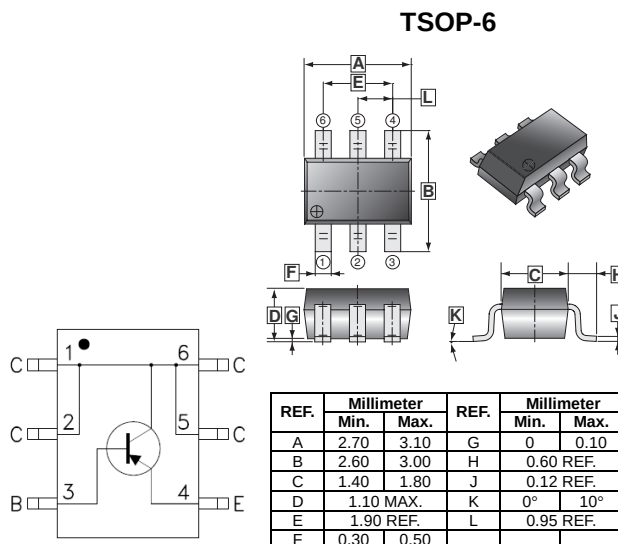
- High current output up to -3A
- Low saturation voltage

MARKING



PACKAGE INFORMATION

Package	MPQ	Leader Size
TSOP-6	3K	7' inch



ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	-40	V
Collector to Emitter Voltage	V_{CEO}	-30	V
Emitter to Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-3	A
Total Power Dissipation @ $T_C=25^\circ\text{C}$ ³	P_D	1.2	W
Thermal Resistance Junction-ambient Max ¹	$R_{\theta JC}$	105	$^\circ\text{C/W}$
Junction & Storage Temperature	T_J, T_{STG}	150, -55 ~ 150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

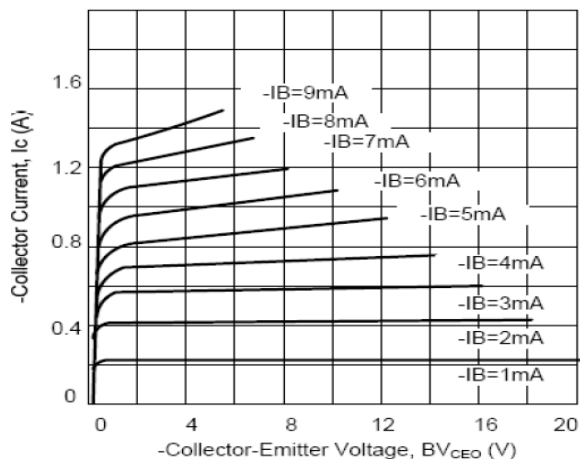
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base breakdown voltage	$V_{(BR)CBO}$	-40	-	-	V	$I_C = -100\mu\text{A}, I_E = 0$
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-30	-	-	V	$I_C = -1\text{mA}, I_B = 0$
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-5	-	-	V	$I_E = -10\mu\text{A}, I_C = 0$
Collector cut-off current	I_{CBO}	-	-	-0.1	μA	$V_{CB} = -30\text{V}, I_E = 0$
Emitter cut-off current	I_{EBO}	-	-	-0.1	μA	$V_{EB} = -5\text{V}, I_C = 0$
Collector-emitter saturation voltage ²	$V_{CE(sat)}$	-	-0.15	-0.25	V	$I_C = -0.5\text{A}, I_B = -5\text{mA}$
		-	-0.85	-1		$I_C = -2\text{A}, I_B = -20\text{mA}$
		-	-0.25	-0.5		$I_C = -2\text{A}, I_B = -200\text{mA}$
Base-emitter saturation voltage ²	$V_{BE(sat)}$	-	-0.8	-1.1	V	$I_C = -0.5\text{A}, I_B = -5\text{mA}$
		-	-1	-1.5		$I_C = -2\text{A}, I_B = -200\text{mA}$
DC current gain ²	h_{FE}	30	-	-		$V_{CE} = -2\text{V}, I_C = -20\text{mA}$
		160	-	320		$V_{CE} = -2\text{V}, I_C = -1\text{A}$
Transition frequency	f_T	-	80	-	MHz	$V_{CE} = -5\text{V}, I_C = -100\text{mA}, f = 100\text{MHz}$
Collector output capacitance	C_{ob}	-	55	-	pF	$V_{CB} = -10\text{V}, f = 1\text{MHz}$

NOTE:

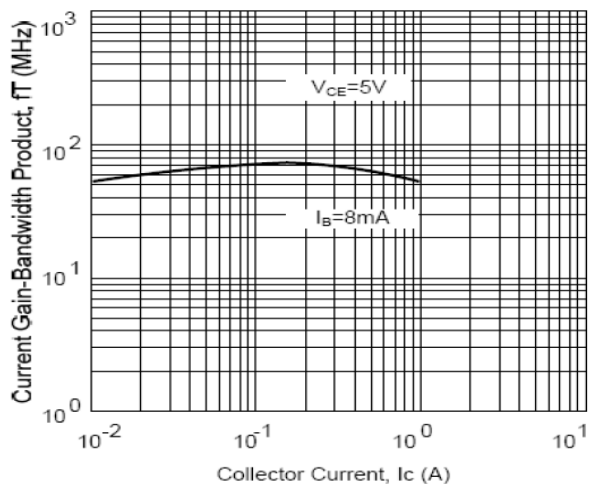
1. Surface mounted on a 1 inch² FR-4 board with 2OZ copper. , 167 $^\circ\text{C/W}$ when mounted on Min. copper pad.
2. The data tested by pulsed , pulse width $\leq 300\mu\text{s}$, duty cycle $\leq 2\%$
3. The power dissipation is limited by 150 $^\circ\text{C}$ junction temperature

CHARACTERISTIC CURVES

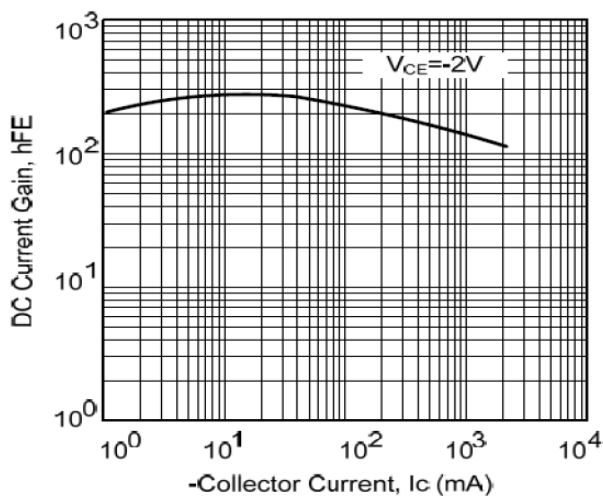
Static Characteristics



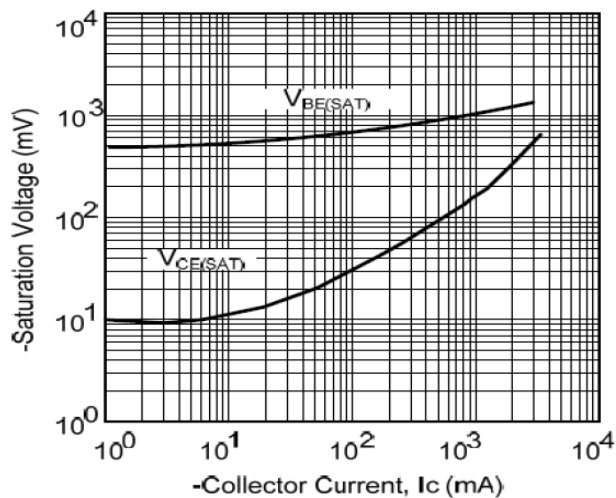
Current Gain-Bandwidth Product



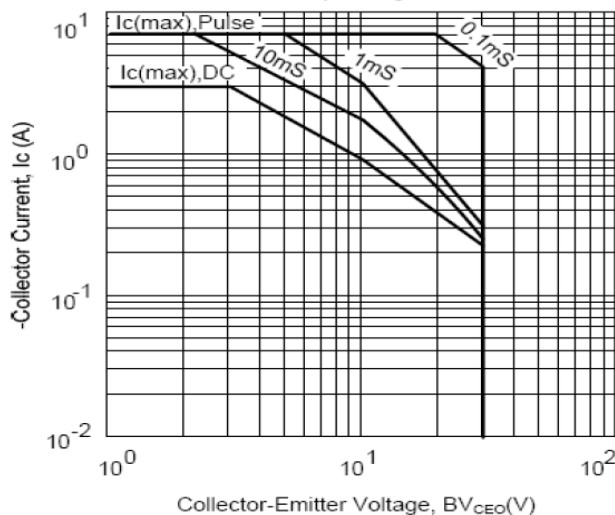
DC Current Gain



Saturation Voltage



Safe Operating Area



Power Derating

