

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

FEATURES

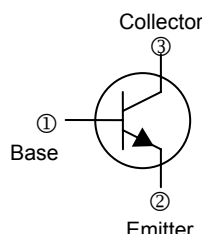
- High transition frequency
- Small $r_{bb}' \cdot C_c$ and high gain
- Small NF

PACKAGE INFORMATION

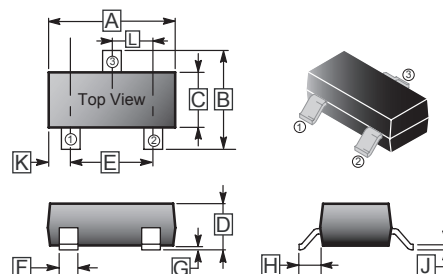
Weight: 0.0078g (Approximately)

MARKING

AD



SOT-23



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.80	3.00	G	0.10 REF.	
B	2.25	2.55	H	0.55 REF.	
C	1.20	1.40	J	0.08	0.15
D	0.90	1.15	K	0.5 REF.	
E	1.80	2.00	L	0.95 TYP.	
F	0.30	0.50			

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V _{CBO}	20	V
Collector to Emitter Voltage	V _{CEO}	11	V
Emitter to Base Voltage	V _{EBO}	3	V
Collector Current - Continuous	I _C	50	mA
Collector Power Dissipation	P _c	100	mW
Junction, Storage Temperature	T _J , T _{STG}	+150, -55 ~ +150	°C

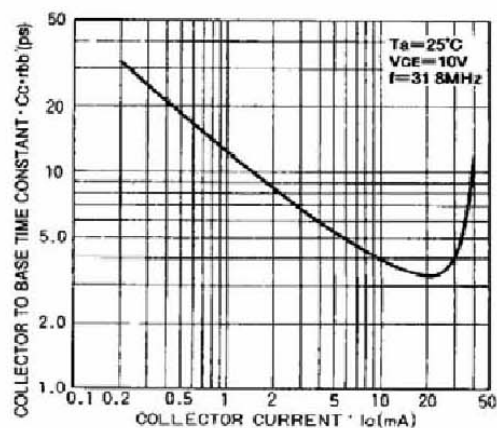
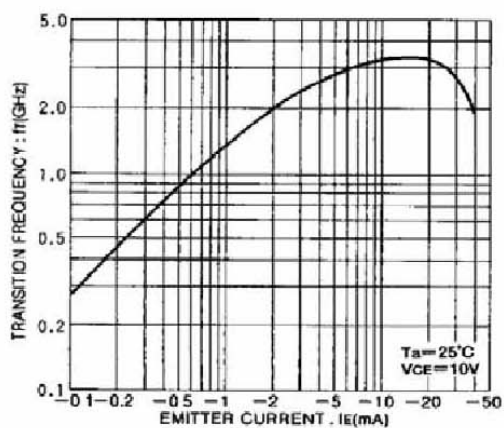
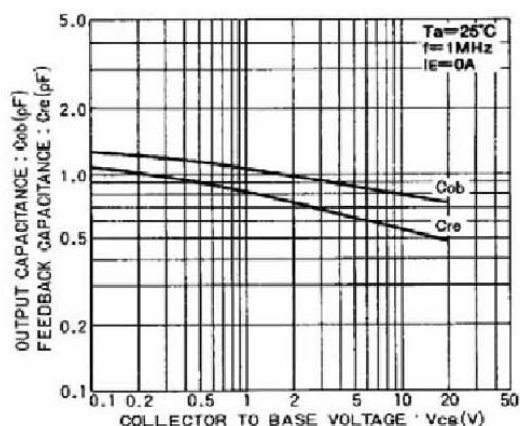
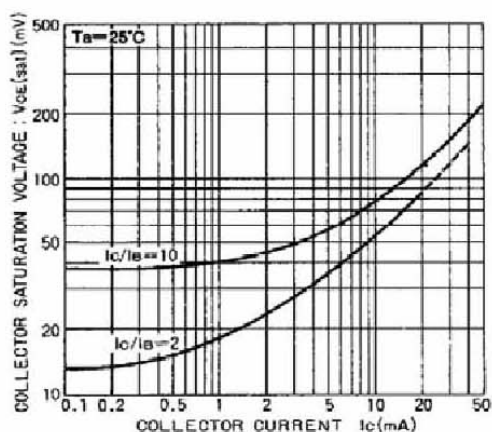
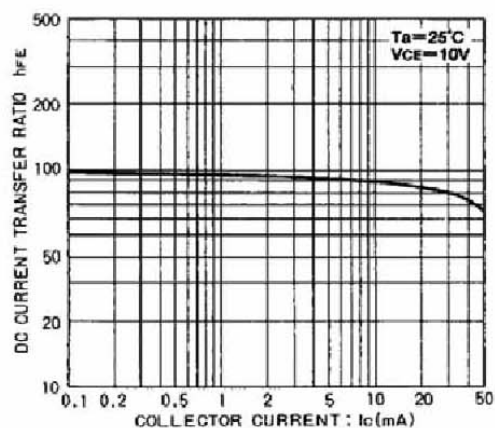
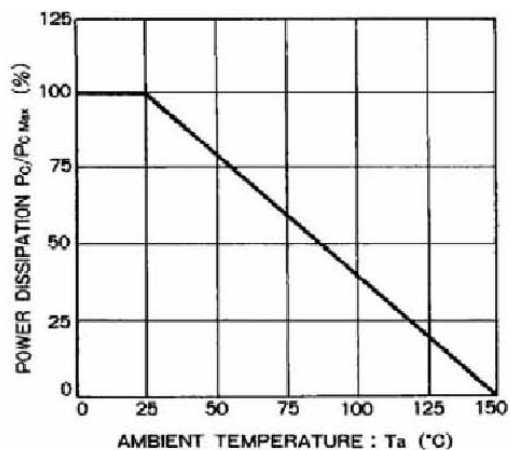
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-Base Breakdown Voltage	V _{(BR)CBO}	20	-	-	V	I _C =10μA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	11	-	-	V	I _C = 1mA, I _B =0
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	3	-	-	V	I _E =10μA, I _C =0
Collector Cut-Off Current	I _{CBO}	-	-	0.5	μA	V _{CB} =10V, I _E =0
Emitter Cut-Off Current	I _{EBO}	-	-	0.5	μA	V _{EB} = 2V, I _C =0
Collector-Emitter Saturation Voltage	V _{CE(sat)}	-	-	500	mV	I _C =-10mA, I _B = 5mA
DC Current Gain	h _{FE}	56	-	180		V _{CE} = 10V, I _C =5mA
Transition Frequency	f _T	1.4	-	-	GHz	V _{CE} =10V, I _C = 10mA, f = 500MHz
Output Capacitance	C _{ob}	-	-	1.5	pF	V _{CB} =10V, I _E =0A, f=1MHz
Collector-Base Time Constant	r _{bb'} · C _c	-	-	12	pS	I _C =10mA, V _{CB} =10V, f=31.8MHz
Noise Figure	F	-	3.5	-	dB	V _{CE} =6V, I _C = 2mA, f = 500MHz, R _s = 50Ω

CLASSIFICATION OF h_{FE}

Rank	N	P
Range	56 - 120	82 - 180

CHARACTERISTIC CURVES



CHARACTERISTIC CURVES (cont'd)

