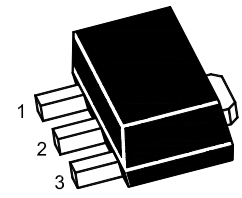
SOT-89 Plastic-Encapsulate Transistors

TRANSISTOR (NPN)



1.Base 2.Collector 3.Emitter

SOT-89 Plastic Package

FEATURES

- Small Flat Package
- High Breakdown Voltage
- Excellent DC Current Gain Linearity

MARKING:BV82

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	1	A
P_C	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

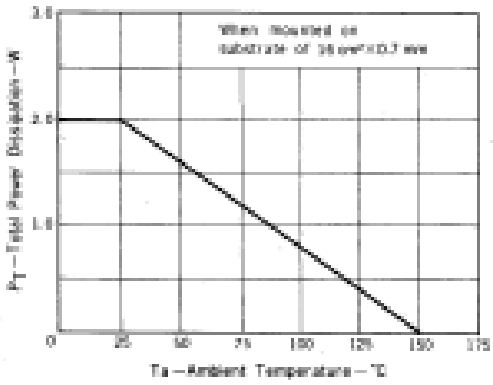
ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=0.1mA,I_E=0	100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=0.1mA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=100V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$*	V_{CE}=2V, I_C=100mA	90		400	
	$h_{FE(2)}$*	V_{CE}=2V, I_C=500mA	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$*	I_C=500mA,I_B=50mA			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$*	I_C=500mA,I_B=50mA			1.5	V
Base-emitter voltage	V_{BE}*	V_{CE}=10V, I_C=10mA	0.6		0.7	V
Transition frequency	f_T	V_{CE}=5V,I_C=10mA		160		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		12		pF

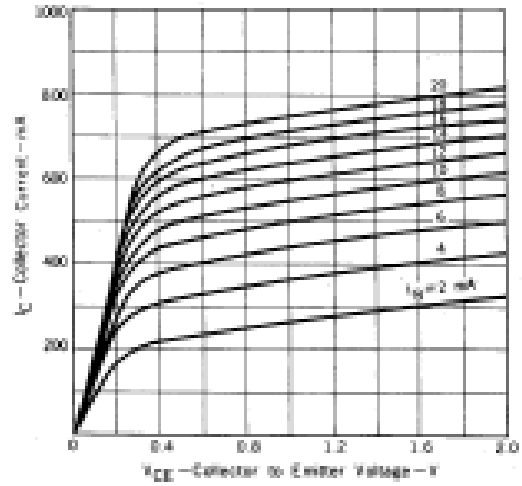
*Pulse test

TYPICAL CHARACTERISTICS (Ta = 25 °C)

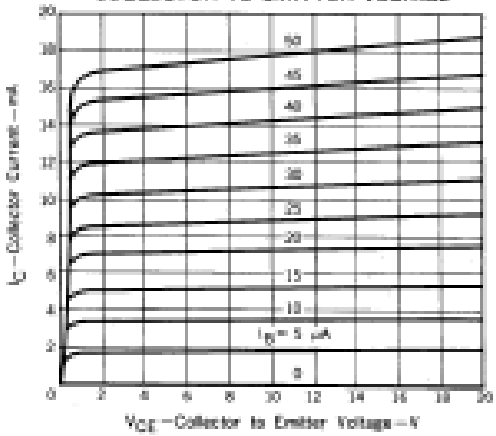
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



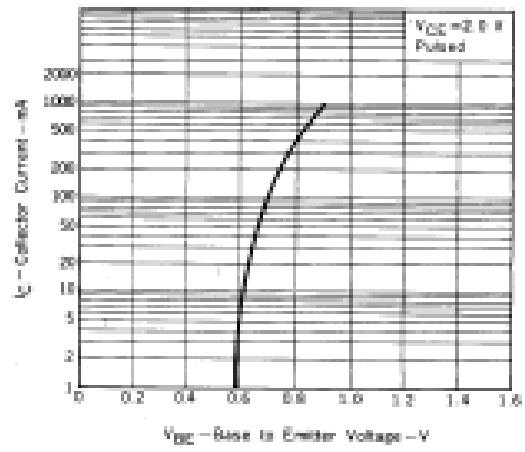
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



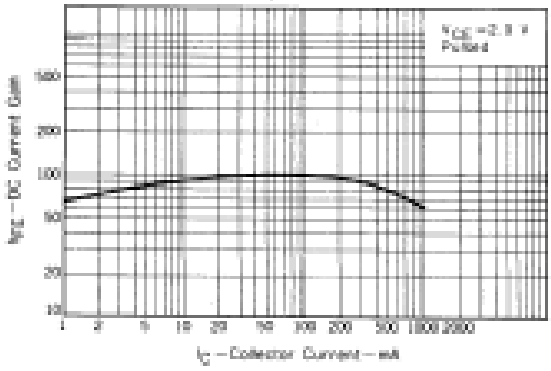
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



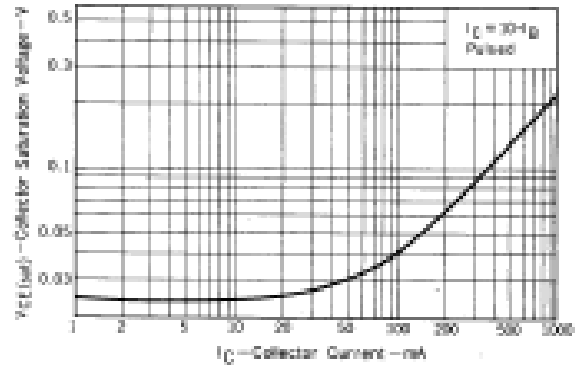
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



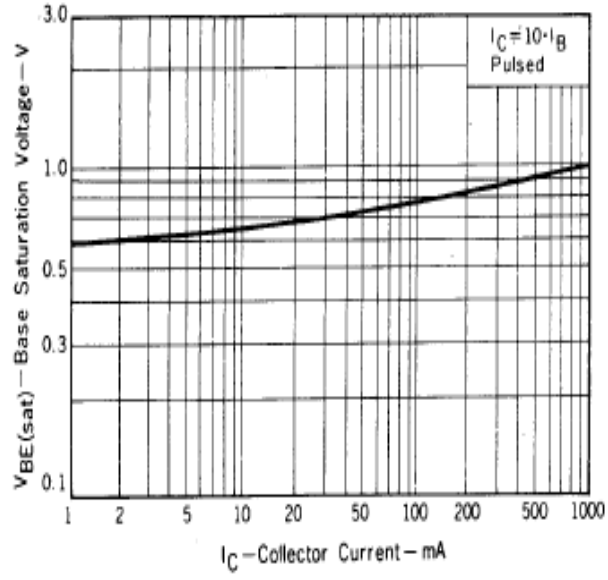
DC CURRENT GAIN vs. COLLECTOR CURRENT



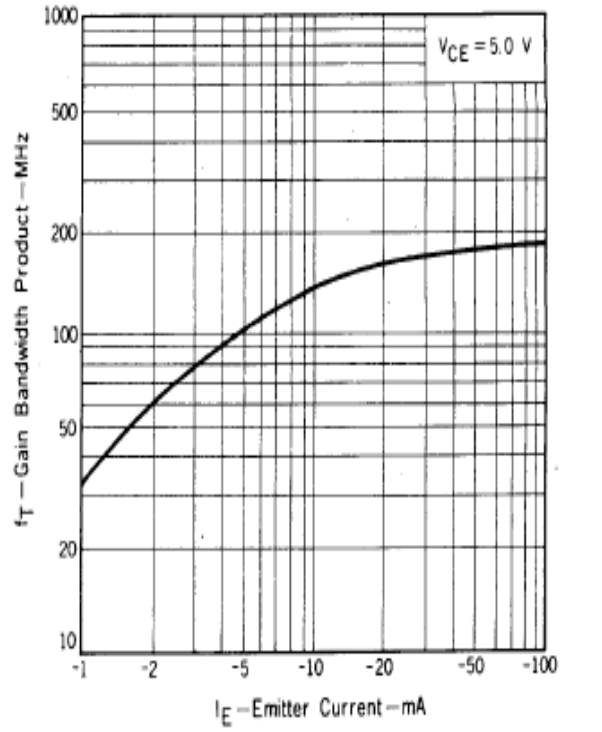
COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



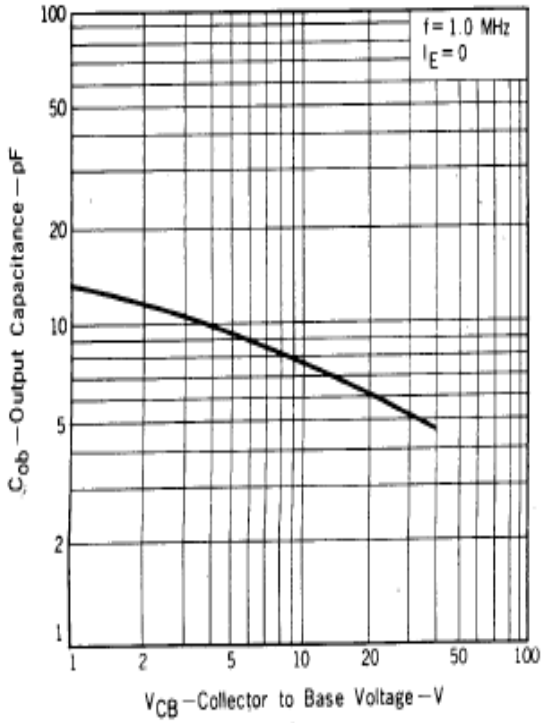
BASE SATURATION VOLTAGE vs. COLLECTOR CURRENT



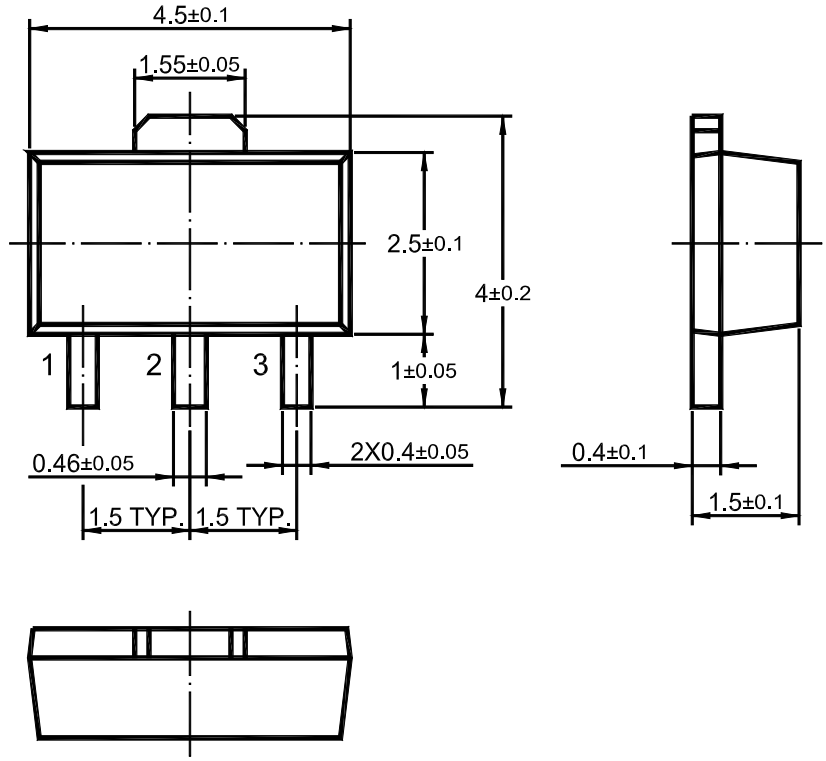
GAIN BANDWIDTH PRODUCT vs. EMITTER CURRENT



OUTPUT CAPACITANCE vs. REVERSE VOLTAGE



SOT-89 PACKAGE OUTLINE



Dimensions in mm