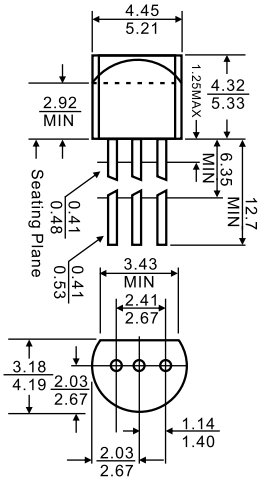
2N2222

TO-92 Bipolar Transistors(NPN)

1. EMITTER
2. BASE
3. COLLECTOR

TO-92



Dimensions in inches and (millimeters)

Features

✧ Power dissipation

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	600	mA
P_C	Collector Power dissipation	0.625	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55to +150	℃
$R_{\theta JA}$	Thermal Resistance, junction to Ambient	357	℃/mW

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Base Breakdown Voltage	V_{CBO}	I_C=10μA I_E=0				V
Collector to Emitter Breakdown Voltage	V_{CEO}	I_E=10mA I_B=0				V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=10μA I_C=0	5			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=50V I_E=0			0.01	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=5.0V I_C=0			0.1	μA
DC Current Gain	h_{FE}	V_{CE}=10V I_C=150mA	100		300	
Collector-Emitter Saturation Voltage	$V_{CE(sat)(1)}$	I_C=150mA I_B=15mA			0.4	V
	$V_{CE(sat)(2)}$	I_C=500mA I_B=50mA			1.6	V
Base-Emitter Saturation Voltage	$V_{BE(sat)(1)}$	I_C=150mA I_B=15mA			1.3	V
	$V_{BE(sat)(2)}$	I_C=500mA I_B=50mA			2.6	V
Transition Frequency	f_T	V_{CE}=20V I_C=20mA f=100MHz	250			MHz
Collector Output Capacitance	C_{ob}	V_{CB}=10V I_E=0 f=1.0MHz			8.0	pF
Turn-On Time	T_{on}	V_{CC}=30V V_{BE}=0.5V I_C=150mA I_{B1}=15mA			35	ns
Turn-Off Time	T_{off}	V_{CC}=30V I_C=150mA I_{B1}=I_{B2}=15mA			285	ns

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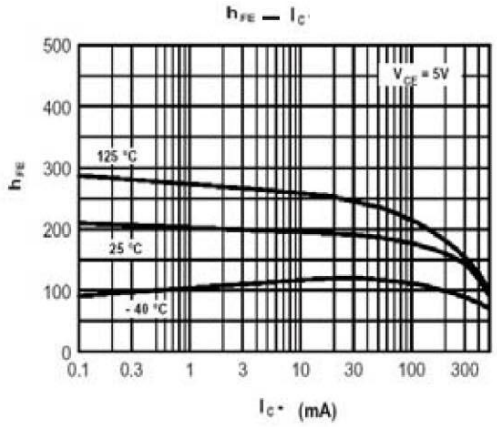
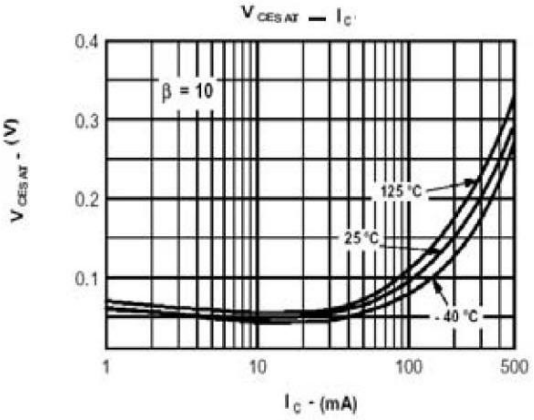
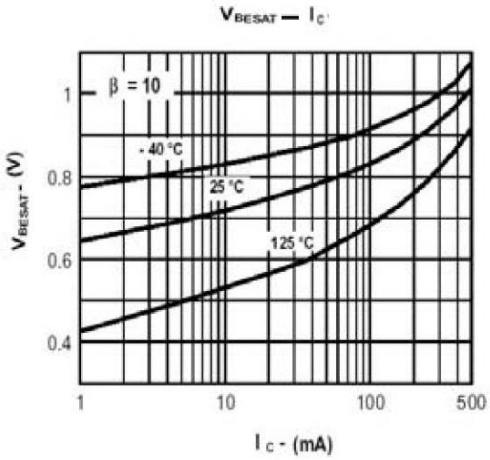
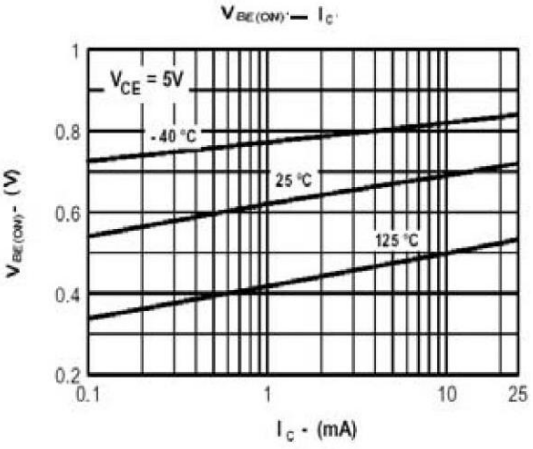
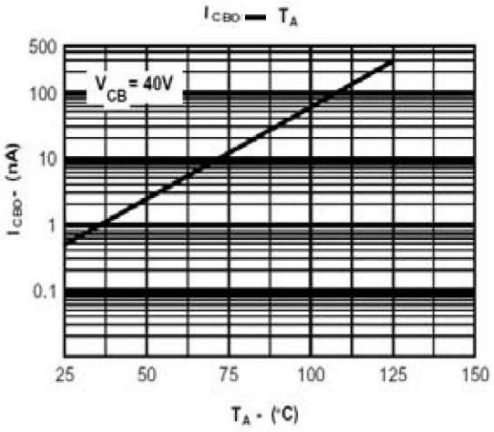
Typical Characteristics

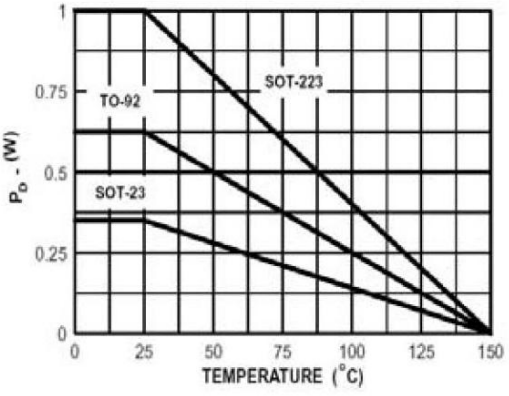












Package	Packing	Quantity	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	Bulk	1000pcs/BP	10,000pcs	245×170×100	100,000pcs	525×375×270
TO-92	Tape	2000pcs/TP	2000pcs	333×162×43	20,000pcs	350×340×250