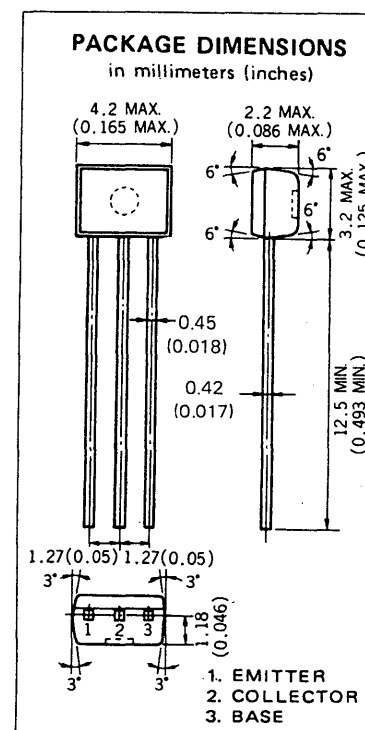


DESCRIPTION The 2SC3732 is designed for general purpose amplifier and high speed switching applications.

- FEATURES**
- High Frequency Current Gain.
 - High Speed Switching.
 - Small Output Capacitance.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperatures	
Storage Temperature	-55 to +150 °C
Junction Temperature	150 °C Maximum
Maximum Power Dissipation ($T_a = 25\text{ °C}$)	
Total Power Dissipation	250 mW
Maximum Voltages and Currents ($T_a = 25\text{ °C}$)	
V_{CBO} Collector to Base Voltage	40 V
V_{CES} Collector to Emitter Voltage	40 V
V_{CEO} Collector to Emitter Voltage	15 V
V_{EBO} Emitter to Base Voltage	5.0 V
I_C Collector Current	200 mA
I_C Collector Current (10 μ s pulse)	500 mA



ELECTRICAL CHARACTERISTICS ($T_a = 25\text{ °C}$)

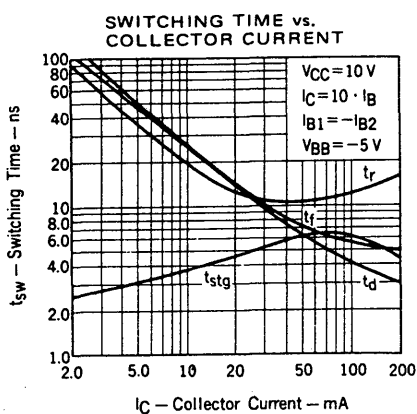
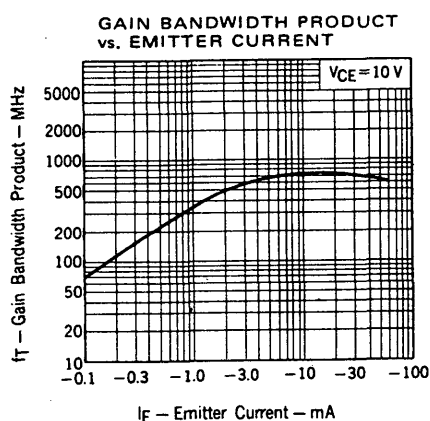
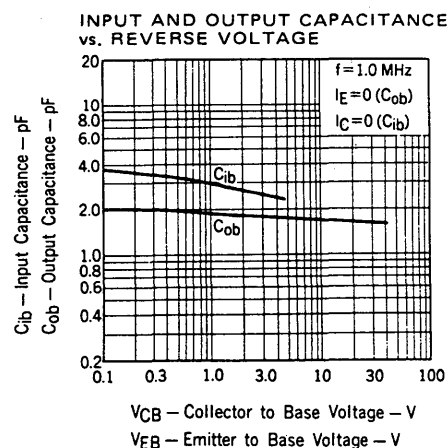
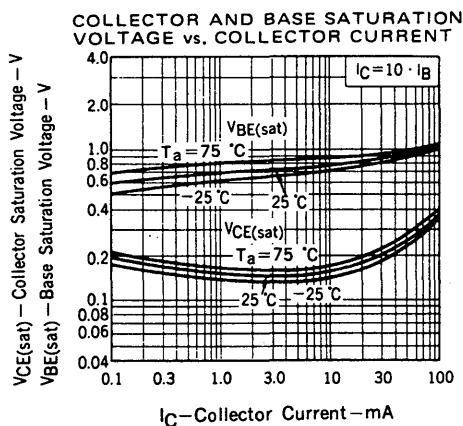
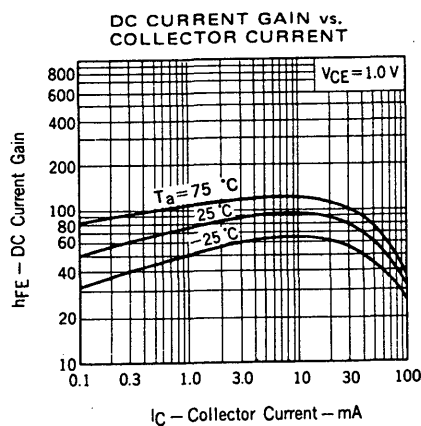
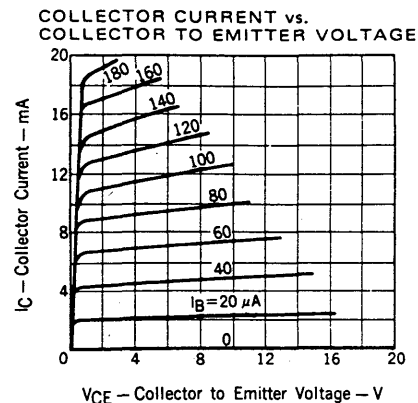
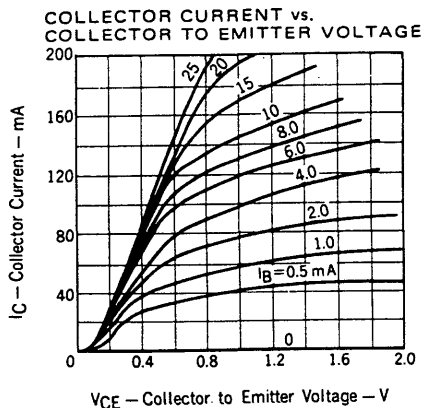
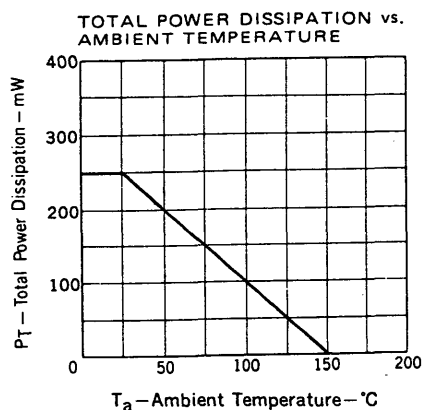
SYMBOL	CHARACTERISTIC	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
t_{on}	Turn-on Time		8.0	12	ns	$V_{CC} = 3.0\text{ V}$, $I_C = 10\text{ mA}$, $I_{B1} = 3.0\text{ mA}$, $V_{BE} = -1.5\text{ V}$
t_{off}	Turn-off Time		12	18	ns	$V_{CC} = 3.0\text{ V}$, $I_C = 10\text{ mA}$, $I_{B1} = 3.0\text{ mA}$, $I_{B2} = -1.5\text{ mA}$
t_{stg}	Storage Time		6.0	13	ns	$I_C = 10\text{ mA}$, $I_{B1} = -I_{B2} = 10\text{ mA}$
f_T	Gain Bandwidth Product	500	750		MHz	$V_{CE} = 10\text{ V}$, $I_E = -10\text{ mA}$, $f = 100\text{ MHz}$
C_{ob}	Output Capacitance		1.8	4.0	pF	$V_{CB} = 5.0\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$
h_{FE}^*	DC Current Gain	40	90	200	—	$V_{CE} = 1.0\text{ V}$, $I_C = 10\text{ mA}$
$V_{CE(sat)}^*$	Collector Saturation Voltage		0.15	0.25	V	$I_C = 10\text{ mA}$, $I_B = 1.0\text{ mA}$
$V_{BE(sat)}^*$	Base Saturation Voltage		0.80	0.85	V	$I_C = 10\text{ mA}$, $I_B = 1.0\text{ mA}$
I_{CBO}	Collector Cutoff Current			0.1	μ A	$V_{CB} = 20\text{ V}$, $I_E = 0$
I_{EBO}	Emitter Cutoff Current			0.1	μ A	$V_{EB} = 3.0\text{ V}$, $I_C = 0$

* Pulsed PW $\leq 350\text{ }\mu$ s, Duty Cycle $\leq 2\%$

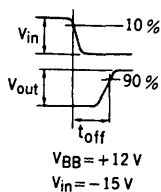
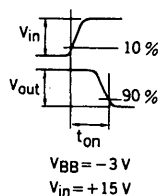
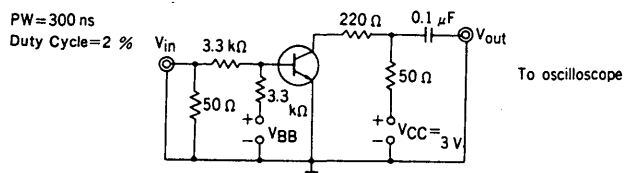
Classification of h_{FE}

Rank	M	L	K
Range	40 to 80	60 to 120	100 to 200

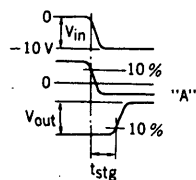
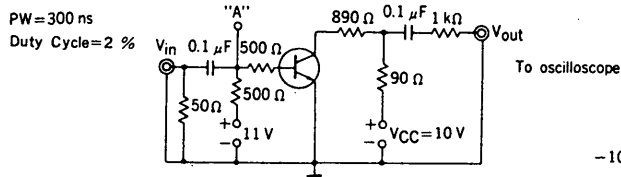
Test Conditions : $V_{CE} = 1.0\text{ V}$, $I_C = 10\text{ mA}$

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

SWITCHING TIME TEST CIRCUIT



t_{on} , t_{off} SWITCHING



t_{stg} SWITCHING