

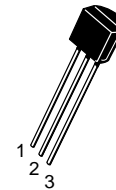
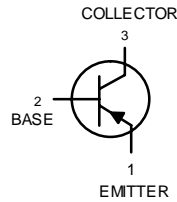
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

TO-92

● **FEATURES**

- Power Dissipation
 P_{CM} : 625 mW ($T_a=25^\circ\text{C}$)
- Collector Current
 I_{CM} : -200 mA
- Collector - Base Voltage
 $V_{(BR)CBO}$: -40 V



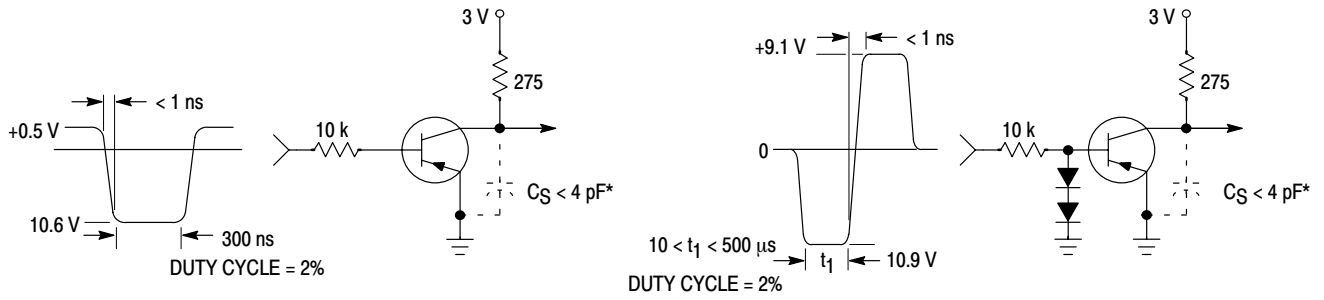
● **ELECTRICAL CHARACTERISTICS** ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	SYMBOL	TEST CONDITIONS	Min.	Typ.	Max.	UNIT
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1\text{ mA}, I_B = 0\text{ A}$	-40	-	-	V
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\ \mu\text{A}, I_E = 0\text{ A}$	-40	-	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -100\ \mu\text{A}, I_C = 0\text{ A}$	-5	-	-	V
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -40\text{ V}, I_E = 0\text{ A}$	-	-	-0.1	μA
Collector Cut-Off Current	I_{CEO}	$V_{CE} = -40\text{ V}, I_B = 0\text{ A}$	-	-	-0.1	
Emitter Cut-Off Current	I_{EBO}	$V_{EB} = -5\text{ V}, I_C = 0\text{ A}$	-	-	-0.1	
DC Current Gain	$h_{FE(1)}$	$V_{CE} = -1\text{ V}, I_C = -10\text{ mA}$	100	-	400	-
	$h_{FE(2)}$	$V_{CE} = -1\text{ V}, I_C = -50\text{ mA}$	60	-	-	
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -50\text{ mA}, I_B = -5\text{ mA}$	-	-	0.3	V
Base - Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -50\text{ mA}, I_B = -5\text{ mA}$	-	-	-0.95	V
Transition Frequency	f_T	$V_{CE} = -20\text{ V}, I_C = -10\text{ mA}$ $f = 100\text{ MHz}$	250	-	-	MHz
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-	-55 ~ +150			$^\circ\text{C}$

● **CLASSIFICATION OF $h_{FE(1)}$**

Rank	O	Y	G
Rang	100 ~ 200	200 ~ 300	300 ~ 400

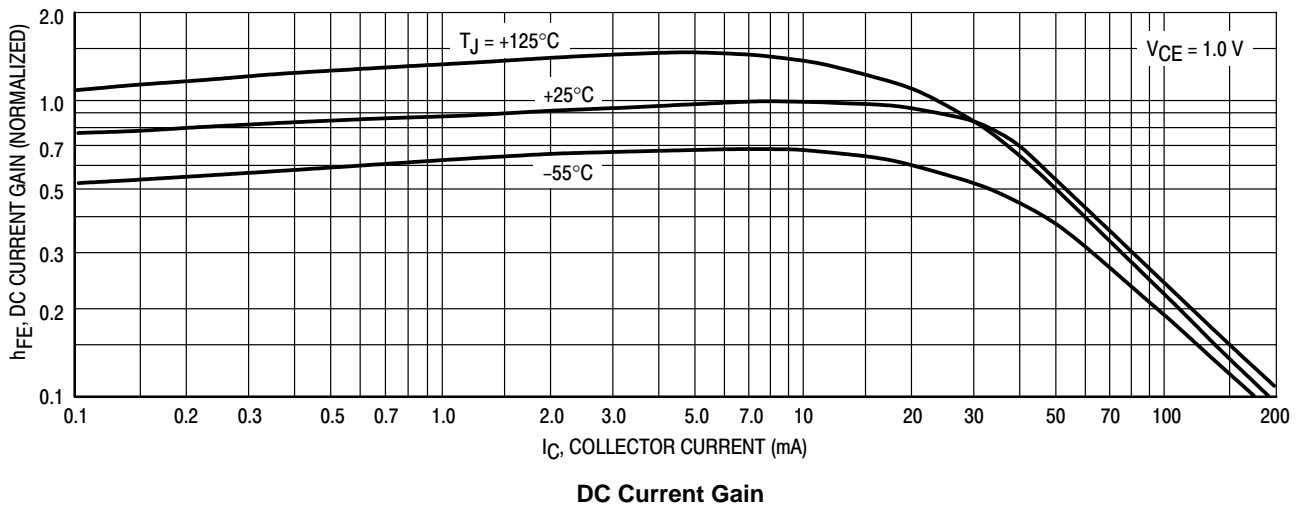
● **TYPICAL CHARACTERISTICS**

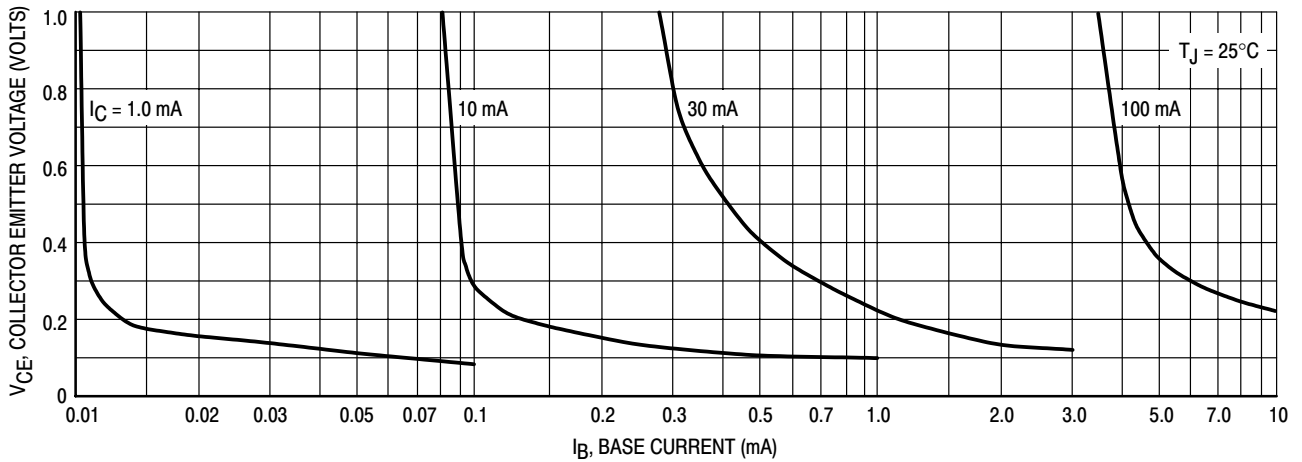


* Total shunt capacitance of test jig and connectors

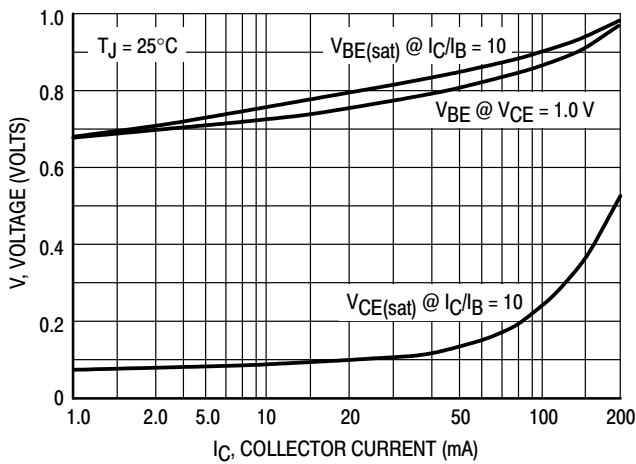
**Delay and Rise Time
Equivalent Test Circuit**

**Storage and Fall Time
Equivalent Test Circuit**

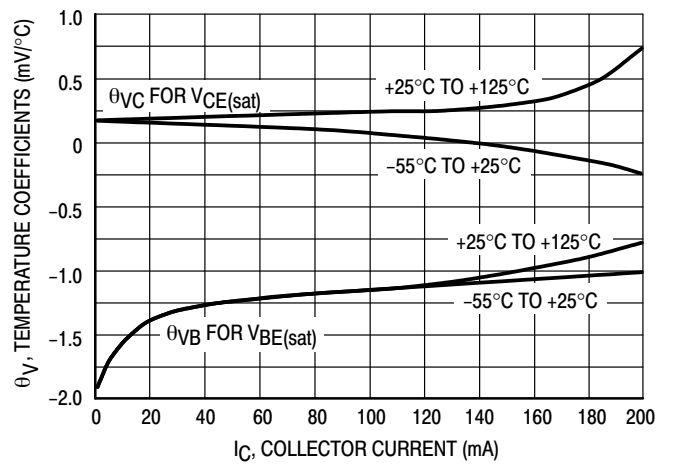




Collector Saturation Region



"ON" Voltages



Temperature Coefficients