

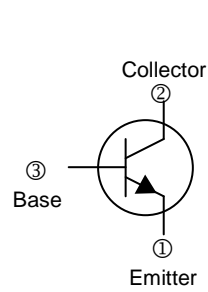
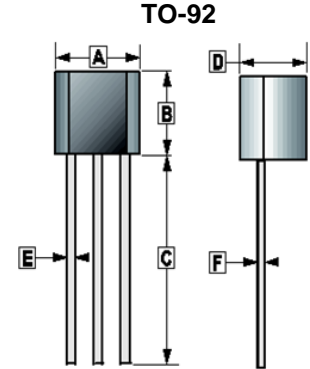
RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURE

- High DC Current Gain and Large Current Capability

CLASSIFICATION OF h_{FE} (1)

Product-Rank	M28ST-B	M28ST-C	M28ST-D
Range	300~550	500~700	650~1000



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.70	F	0.30	0.51
B	4.30	4.70	G	1.27 TYP.	
C	12.70	-	H	1.10	1.40
D	3.30	3.81	J	2.42	2.66
E	0.36	0.56	K	0.36	0.76

ABSOLUTE MAXIMUM RATINGS at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	V_{CBO}	40	V
Collector to Emitter Voltage	V_{CEO}	20	V
Emitter to Base Voltage	V_{EBO}	6	V
Collector Current	I_C	1	A
Total Power Dissipation	P_D	0.625	W
Thermal Resistance From Junction	$R_{\theta JA}$	200	$^\circ\text{C} / \text{W}$
Junction, Storage Temperature	T_J, T_{STG}	150, -55~150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector-base Breakdown Voltage	$V_{(BR)CBO}$	40	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector-emitter Breakdown Voltage	$V_{(BR)CEO}$	20	-	-	V	$I_C=1\text{mA}, I_B=0$
Emitter-base Breakdown Voltage	$V_{(BR)EBO}$	60	-	-	V	$I_E=100\mu\text{A}, I_C=0$
Collector Cut-off Current	I_{CBO}	-	-	1	μA	$V_{CB}=40\text{V}, I_E=0$
Collector Cut-off Current	I_{CEO}	-	-	5	μA	$V_{CE}=20\text{V}, I_B=0$
Emitter Cut-off Current	I_{EBO}	-	-	0.1	μA	$V_{EB}=5\text{V}, I_C=0$
DC Current Gain	h_{FE}	290	-	-		$V_{CE}=1\text{V}, I_C=1\text{mA}$
		300	-	1000		$V_{CE}=1\text{V}, I_C=100\text{mA}$
		300	-	-		$V_{CE}=10\text{V}, I_C=300\text{mA}$
Collector-emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.55	V	$I_C=600\text{mA}, I_B=20\text{mA}$
Transition Frequency	f_T	100	-	-	MHz	$V_{CE}=10\text{V}, I_E=50\text{mA}, f=30\text{MHz}$