

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

FEATURES

- Power switching applications

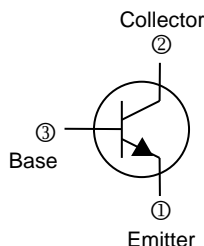
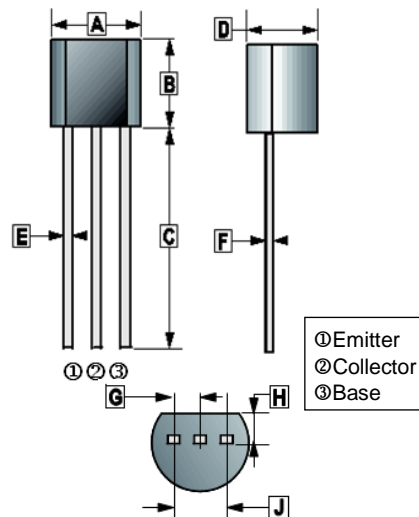
MARKING



ORDER INFORMATION

Part Number	Type
3DD13003B	Lead (Pb)-free
3DD13003B-C	Lead (Pb)-free and Halogen-free

TO-92



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.30	4.70	F	0.30	0.51
B	4.30	4.70	G	1.27 TYP.	
C	12.70	14.50	H	1.10	1.40
D	3.30	3.81	J	2.42	2.66
E	0.36	0.56			

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CB0}	700	V
Collector-Emitter Voltage	V_{CE0}	400	
Emitter-Base Voltage	V_{EB0}	9	
Collector Current-Continuous	I_C	1.5	A
Collector Power Dissipation	P_C	0.9	W
Operation Junction & Storage Temperature Range	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 Condition
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	700	-	-	V	$I_C=1\text{mA}, I_E=0$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	400	-	-		$I_C=10\text{mA}, I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	9	-	-		$I_E=1\text{mA}, I_C=0$
Collector Cut-off Current	I_{CBO}	-	-	100	μA	$V_{CB}=700\text{V}, I_E=0$
	I_{CEO}	-	-	50		$V_{CE}=400\text{V}, I_B=0$
Emitter Cut-off Current	I_{EBO}	-	-	10	μA	$V_{EB}=7\text{V}, I_C=0$
DC Current Gain	h_{FE}	20	-	30		$V_{CE}=10\text{V}, I_C=0.4\text{A}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	3	V	$I_C=1.5\text{A}, I_B=0.5\text{A}$
		-	-	0.8		$I_C=0.5\text{A}, I_B=0.1\text{A}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	-	-	1	V	$I_C=0.5\text{A}, I_B=0.1\text{A}$
Transition Frequency	f_T	-	4	-	MHz	$V_{CE}=10\text{V}, I_C=100\text{mA}, f=1\text{MHz}$
Storage time	t_s	-	4	-	μS	$I_{B1} = -I_{B2} = 0.2\text{A}$
Fall time	t_f	-	0.7	-		$I_C=1\text{A}$

CHARACTERISTIC CURVES

Static Characteristic

