2N3828 TRANSISTOR (NPN)

TO-92

1.EMITTER
2.COLLECTOR
3.BASE

FEATURES

- General Purpose Amplifier Transistor

ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2N3828	TO-92	Bulk	1000pcs/Bag
2N3828-TA	TO-92	Tape	2000pcs/Box

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	40	V
V_{EBO}	Emitter-Base Voltage	3	V
I_C	Collector Current -Continuous	0.1	A
P_D	Collector Power Dissipation	625	mW
R_{KJA}	Thermal Resistance from Junction to Ambient	200	℃ /W
T_J,T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	℃

T_a=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 0.01mA,I_E=0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=0.01mA,I_C=0	3			V
Collector cut-off current	I_{CBO}	V_{CB}=60V,I_E=0			0.1	7A
Collector cut-off current	I_{CEX}	V_{CE}=30V,$V_{BE(off)}$=3V			50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=5V,I_C=0			0.1	7A
DC current gain	h_{FE}	V_{CE}=1V, I_C=12mA	30		200	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=50mA,I_B=5mA			0.3	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$	I_C=50mA,I_B=5mA			0.95	V
Transition frequency	f_T	V_{CE}=20V,I_C=10mA,f=100 MHz	360			MHz