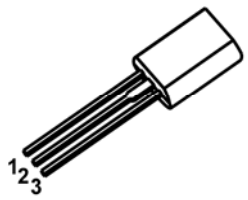
TO-92MOD Plastic-Encapsulate Transistors

2SD1247 TRANSISTOR (NPN)

TO – 92MOD



1. EMITTER
2. COLLECTOR
3. BASE

FEATURES

- Low Saturation Voltage
- Large Current Capacity and Wide ASO

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	2.5	A
P_C	Collector Power Dissipation	1	W
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	125	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 100μA,I_E=0	30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=1mA,I_B=0	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=100μA,I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=20V,I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0			0.1	μA
DC current gain	$h_{FE(1)}$	V_{CE}=2V, I_C=100mA	100		560	
	$h_{FE(2)}$	V_{CE}=2V, I_C=1.5A	65			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=1.5A,I_B=75mA			0.4	V
Collector-emitter saturation voltage	$V_{BE(sat)}$	I_C=1.5A,I_B=75mA			1.2	V
Collector output capacitance	C_{ob}	V_{CB}=10V,I_E=0, f=1MHz		19		pF
Transition frequency	f_T	V_{CE}=10V,I_C=50mA		150		MHz

CLASSIFICATION OF h_{FE}

RANK	R	S	T	U
RANGE	100-200	140-280	200-400	280-560