

isc Silicon NPN Power Transistor

2SD2137A

DESCRIPTION

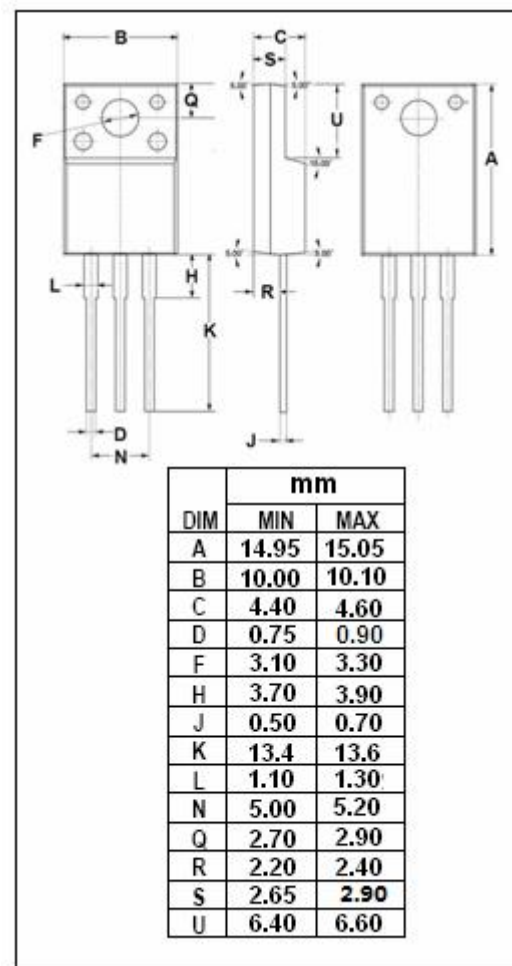
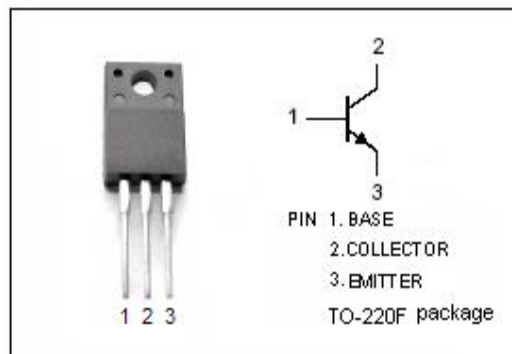
- Silicon NPN triple diffusion planar type
- Complementary to 2SB1417A
- Low Collector to Emitter Saturation Voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation
- Allowing supply with the radial taping

APPLICATIONS

- Designed for power amplifiers

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Pulse	5	A
P_T	Total Power Dissipation @ $T_C=25^{\circ}\text{C}$	15	W
	Total Power Dissipation @ $T_a=25^{\circ}\text{C}$	2	
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~150	$^{\circ}\text{C}$



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ELECTRICAL CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C =30mA, I _B =0	80			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 0.375A			1.2	V
V _{BE(ON)}	Base-Emitter On Voltage	I _C = 3A; V _{CE} = 4V			1.8	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 80V; I _E = 0			100	μA
I _{CEO}	Collector Cutoff Current	V _{CE} = 60V; I _B =0			100	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			100	μA
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} = 4V	70		250	
h _{FE-2}	DC Current Gain	I _C = 3A; V _{CE} =4V	10			
f _T	Current-Gain—Bandwidth Product	I _C = 0.2A; V _{CE} = 5V		30		MHz

Switching times

t _{on}	Turn-on Time	I _C = 1A I _{B1} = -I _{B2} = 0.1A, V _{CC} ≈ 50V		0.3		μs
t _{stg}	Storage Time			2.5		μs
t _f	Fall Time			0.2		μs

◆ h_{FE-1} Classifications

Q	P
70-150	120-250

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