

isc Silicon NPN Power Transistor

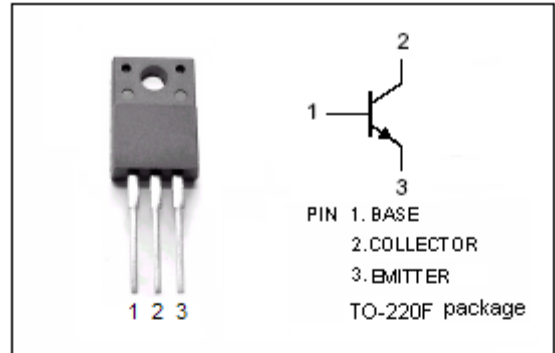
2SD2549

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V(\text{Min})$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 0.7V(\text{Max.}) @ I_C = 3A$
- Good Linearity of h_{FE}

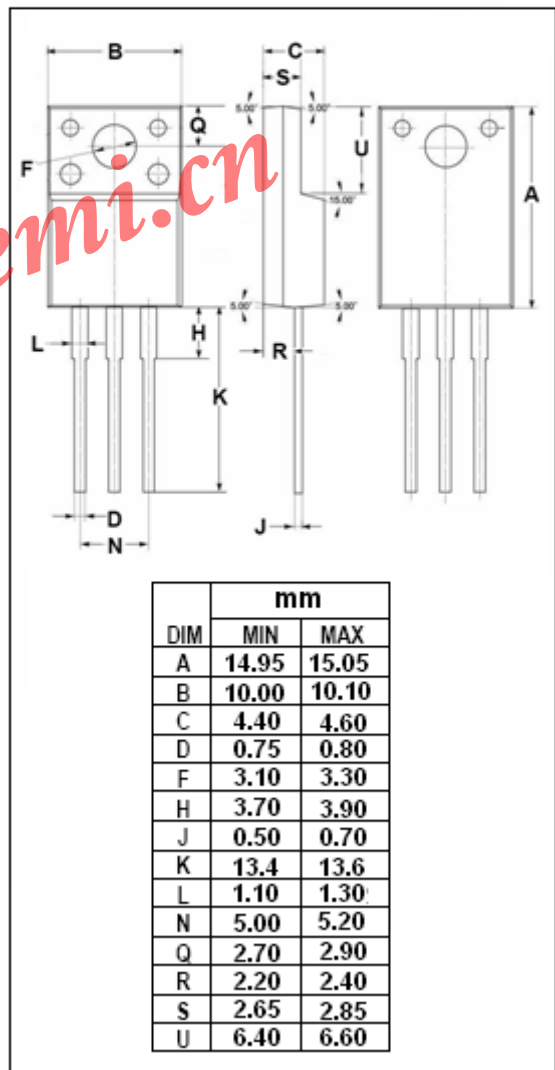
APPLICATIONS

- Designed for power amplifier applications.



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-Peak	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	20	W
	Collector 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

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 30mA; I _B = 0	80			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 0.375A			0.7	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 3A; V _{CE} = 4V			1.8	V
I _{CES}	Collector Cutoff Current	V _{CE} = 70V; V _{BE} = 0			100	μ A
I _{CEO}	Collector Cutoff Current	V _{CE} = 70V; I _B = 0			100	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			1.0	mA
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 = 0.5A; V _{CE} = 10V		30		MHz

Switching Times

t _{on}	Turn-on Time	I _C = 1A; I _{B1} = -I _{B2} = 0.1A; V _{CC} = 50V			0.5	μ s
t _{stg}	Storage Time				4.5	μ s
t _f	Fall Time				0.5	μ s

◆ h_{FE-1} Classifications

Q	P
70-150	120-250