

isc Silicon NPN Power Transistor

2SC4159

DESCRIPTION

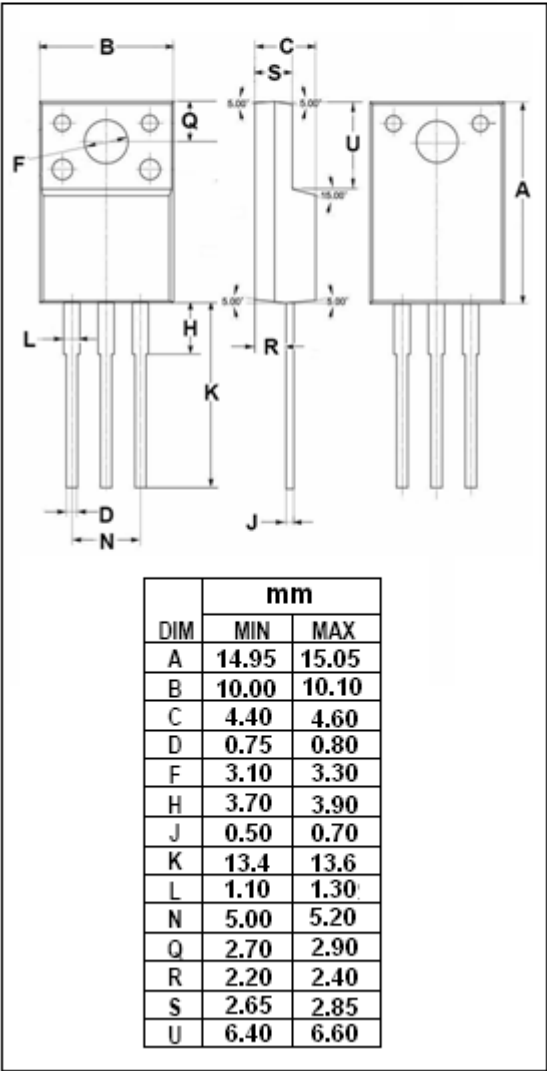
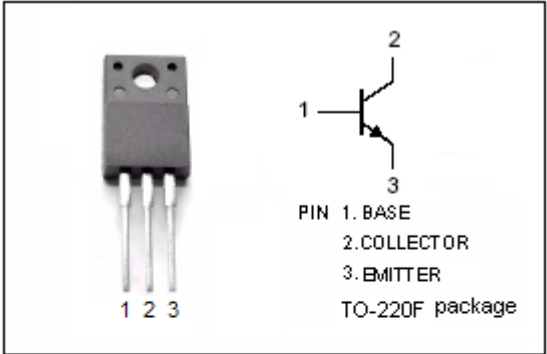
- High Collector-Emitter Breakdown Voltage-
 $V_{(BR)CEO}=160V$ (Min)
- Large Current Capacity
- Complement to Type 2SA1606

APPLICATIONS

- Designed for high-voltage switching, AF power amplifier, 100W output predrivers.

ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	180	V
V_{CEO}	Collector-Emitter Voltage	160	V
V_{EBO}	Emitter-Base Voltage	6.0	V
I_C	Collector Current-Continuous	1.5	A
I_{CM}	Collector Current-Peak	3	A
P_C	Total Power Dissipation @ $T_C=25^{\circ}C$	15	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



ISC Silicon NPN Power Transistor**2SC4159****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	180			V
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 1mA; R _{BE} = ∞	160			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	6			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 500mA; I _B = 50mA		0.3		V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 10mA; V _{CE} = 5V			1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 120V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V; I _C = 0			10	μ A
h _{FE}	DC Current Gain	I _C = 300mA; V _{CE} = 5V	60		200	
f _T	Current-Gain—Bandwidth Product	I _C = 50mA; V _{CE} = 10V		100		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1.0MHz		23		pF

Switching Times

t _{on}	Turn-on Time	I _C = 0.5A, R _L = 40 Ω , I _{B1} = -I _{B2} = 50mA, V _{CC} = -20V; P _W = 20 μ s		0.15		μ s
t _{stg}	Storage Time			0.81		μ s
t _f	Fall Time			0.48		μ s

◆ h_{FE} Classifications

D	E
60-120	100-200