

isc Silicon NPN Power Transistor

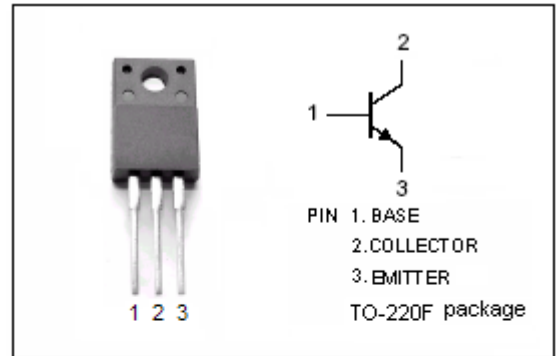
2SC5887

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 50V(\text{Min})$
- High Speed Switching
- Low Saturation Voltage-
: $V_{CE(sat)} = 0.4V(\text{Max}) @ (I_C = 7A; I_B = 0.35A)$
- Complement to Type 2SA2098

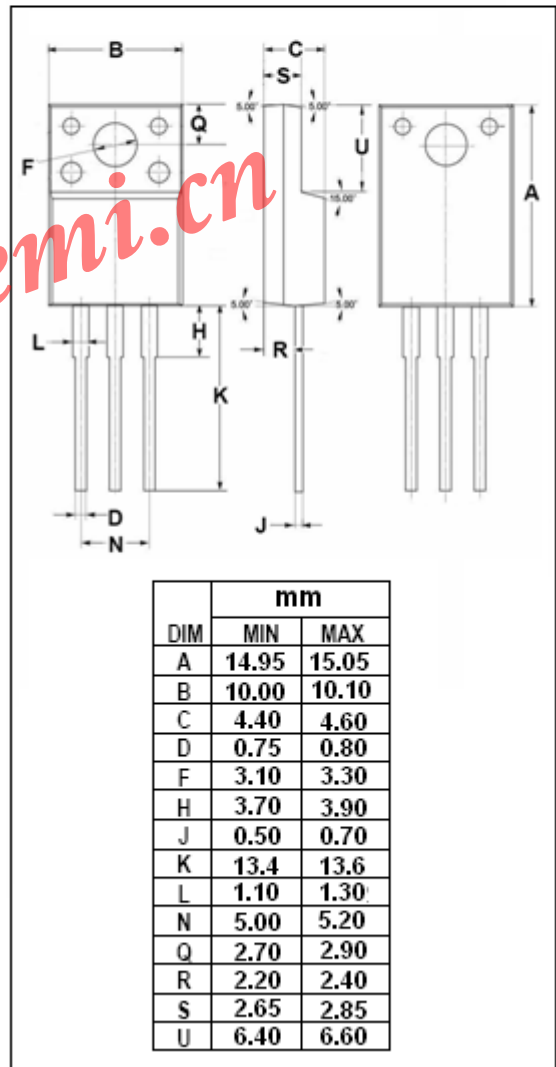
APPLICATIONS

- Relay drivers, lamp drivers, motor drivers.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Pulse	20	A
I_B	Base Current-Continuous	3	A
P_T	Total Power Dissipation @ $T_C=25^\circ\text{C}$	30	W
	Total Power Dissipation @ $T_a=25^\circ\text{C}$	2.0	
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 = 1mA; R _{BE} = ∞	50			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 0.1mA; I _E = 0	60			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 0.1mA; I _C = 0	6			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 7A; I _B = 0.35A			0.4	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 7A; I _B = 0.35A			1.4	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 40V; 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 = 1A; V _{CE} = 2V	180		560	
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V; f= 1.0MHz		100		pF
f _T	Current-Gain—Bandwidth Product	I _C = 1A; V _{CE} = 10V		300		MHz

Switching times

t _{on}	Turn-on Time	I _C = 5A, I _{B1} = -I _{B2} = 0.25A, V _{CC} = 20V		50		ns
t _{stg}	Storage Time			700		ns
t _f	Fall Time			40		ns