

isc Silicon PNP Power Transistors
D45C10
DESCRIPTION

- Low Saturation Voltage
- Good Linearity of h_{FE}
- Fast Switching Speeds
- Complement to Type D44C10
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

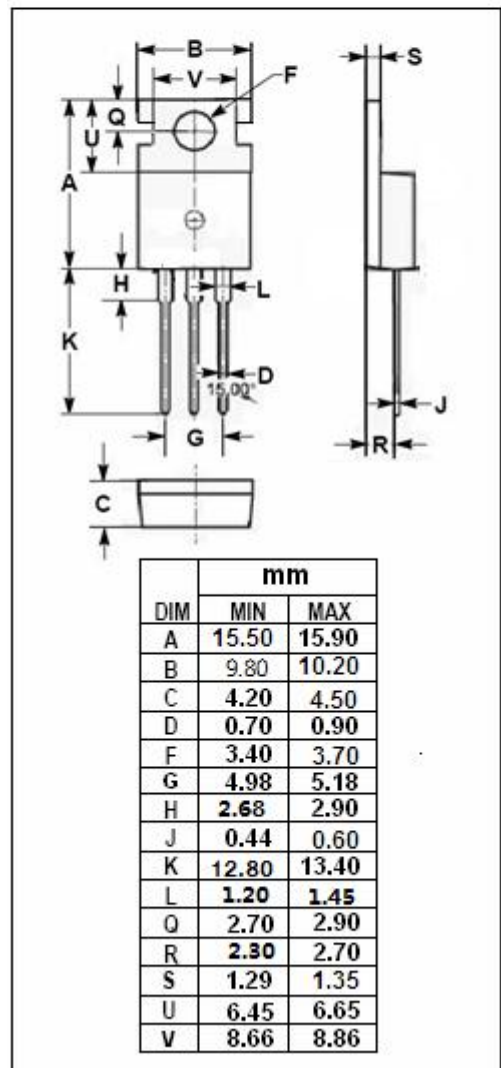
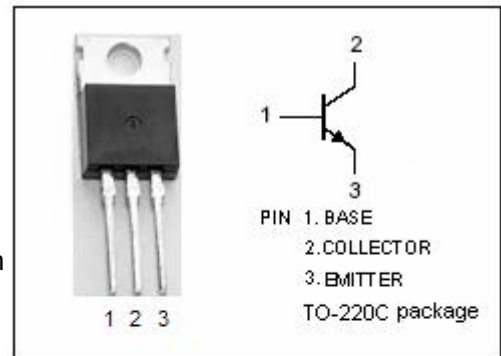
- Designed for various specific and general purpose application such as: output and driver stages of amplifiers operating at frequencies from DC to greater than 1.0MHz series, shunt and switching regulators; low and high frequency inverters/converters and many others.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage	-90	V
V_{CEO}	Collector-Emitter Voltage	-80	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current-Continuous	-4	A
I_{CM}	Collector Current-Peak	-6	A
I_B	Base Current-Continuous	-1	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	30	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	4.2	$^\circ\text{C/W}$



ELECTRICAL CHARACTERISTICS

 T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = -1A ; I _B = -100mA			-0.5	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = -1A ; I _B = -100mA			-1.3	V
I _{CES}	Collector Cutoff Current	V _{CE} = -90V, V _{BE} = 0			-10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C = 0			-100	μ A
h _{FE-1}	DC Current Gain	I _C = -0.2A ; V _{CE} = -1V	25			
h _{FE-2}	DC Current Gain	I _C = -2A ; V _{CE} = -1V	10			
f _T	Current-Gain—Bandwidth Product	I _C = -20mA; V _{CE} = -4V; f _{test} = 1MHz		40		MHz

Switching Times

t _r	Rise Time	I _C = -1A; I _{B1} = -I _{B2} = -0.1A; V _{CC} = -20V			0.2	μ s
t _s	Storage Time				0.6	μ s
t _f	Fall Time				0.3	μ s

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