

**Silicon PNP Power Transistors**

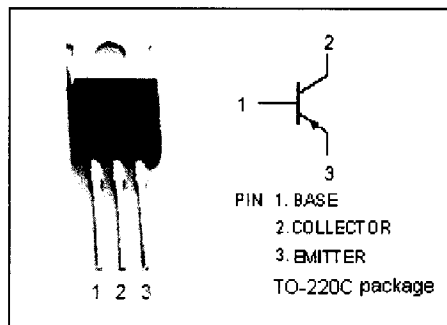
**D45C10**

**DESCRIPTION**

- Low Saturation Voltage
- Good Linearity of  $h_{FE}$
- Fast Switching Speeds
- Complement to Type D44C10

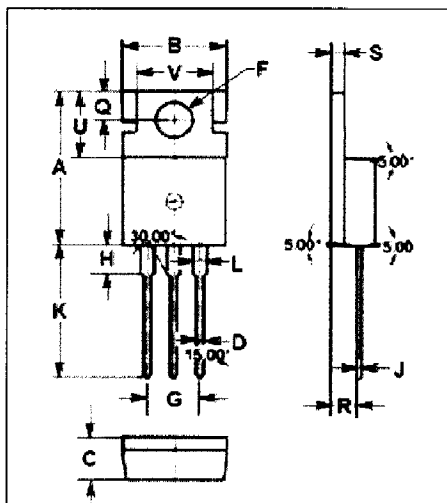
**APPLICATIONS**

- 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	$^\circ\text{C}$

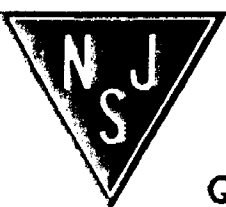


DIM	mm	
	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

**THERMAL CHARACTERISTICS**

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

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## D45C10

### ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -1\text{A}; I_B = -100\text{mA}$			-0.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -1\text{A}; I_B = -100\text{mA}$			-1.3	V
$I_{CES}$	Collector Cutoff Current	$V_{CE} = -90\text{V}; V_{BE} = 0$			-10	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -5\text{V}; I_C = 0$			-100	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C = -0.2\text{A}; V_{CE} = -1\text{V}$	25			
$h_{FE-2}$	DC Current Gain	$I_C = -2\text{A}; V_{CE} = -1\text{V}$	10			
$f_T$	Current-Gain—Bandwidth Product	$I_C = -20\text{mA}; V_{CE} = -4\text{V}; f_{test} = 1\text{MHz}$		40		MHz

### Switching Times

$t_r$	Rise Time	$I_C = -1\text{A}; I_{B1} = -I_{B2} = -0.1\text{A}; V_{CC} = -20\text{V}$			0.2	$\mu\text{s}$
$t_s$	Storage Time				0.6	$\mu\text{s}$
$t_f$	Fall Time				0.3	$\mu\text{s}$