D44C SERIES

SILICON
NPN POWER TRANSISTORS

TO-220 CASE

Central Semiconductor Corp.

www.centralsemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR D44C series devices are silicon NPN power transistors designed for general purpose amplifier and switching applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: (T_C=25°C)	**SYMBOL**	**D44C1 D44C2 D44C3**	**D44C4 D44C5 D44C6**	**D44C7 D44C8 D44C9**	**D44C10 D44C11 D44C12**	**UNITS**
Collector-Emitter Voltage	V_{CES}	40	55	70	90	V
Collector-Emitter Voltage	V_{CEO}	30	45	60	80	V
Emitter-Base Voltage	V_{EBO}		5.0			V
Continuous Collector Current	I_C		4.0			A
Peak Collector Current	I_{CM}		6.0			A
Power Dissipation	P_D		30			W
Operating and Storage Junction Temperature	T_J, T_{stg}		-65 to +150			°C
Thermal Resistance	Θ_{JC}		4.2			°C/W
Thermal Resistance	Θ_{JA}		75			°C/W

ELECTRICAL CHARACTERISTICS: (T_C=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**TYP**	**MAX**	**UNITS**
I_{CES}	V_{CE}=Rated V_{CES}			10	µA
I_{EBO}	V_{EB}=5.0V			100	µA
BV_{CEO}	I_C=100mA (D44C1, 2, 3)	30			V
BV_{CEO}	I_C=100mA (D44C4, 5, 6)	45			V
BV_{CEO}	I_C=100mA (D44C7, 8, 9)	60			V
BV_{CEO}	I_C=100mA (D44C10, 11, 12)	80			V
$V_{CE(SAT)}$	I_C=1.0A, I_B=50mA (D44C2, 3, 5, 6, 8, 9, 11, 12)			0.5	V
$V_{CE(SAT)}$	I_C=1.0A, I_B=100mA (D44C1, 4, 7, 10)			0.5	V
$V_{BE(SAT)}$	I_C=1.0A, I_B=100mA			1.3	V
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz			100	pF
f_T	V_{CE}=4.0V, I_C=20mA		50		MHz
t_d+t_r	I_C=1.0A, I_{B1}=100mA		100		ns
t_s	I_C=1.0A, I_{B1}=I_{B2}=100mA		500		ns
t_f	I_C=1.0A, I_{B1}=I_{B2}=100mA		75		ns

R1 (4-March 2014)

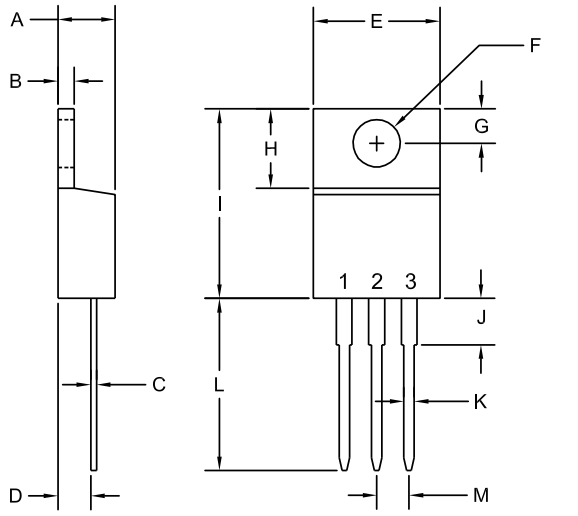
D44C SERIES

SILICON
NPN POWER TRANSISTORS

ELECTRICAL CHARACTERISTICS - Continued: (T_C=25°C unless otherwise noted)

		D44C3 D44C6 D44C9 D44C12		D44C2 D44C5 D44C8 D44C11		D44C1 D44C4 D44C7 D44C10	
SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**MIN**	**MAX**	**MIN**	**MAX**
h_{FE}	V_{CE}=1.0V, I_C=0.2A	40	120	100	220	25	-
h_{FE}	V_{CE}=1.0V, I_C=2.0A	20	-	20	-	-	-
h_{FE}	V_{CE}=1.0V, I_C=1.0A	-	-	-	-	10	-

TO-220 CASE - MECHANICAL OUTLINE



R2

DIMENSIONS				
	INCHES		MILLIMETERS	
SYMBOL	MIN	MAX	MIN	MAX
A	0.170	0.190	4.31	4.82
B	0.045	0.055	1.15	1.39
C	0.013	0.026	0.33	0.65
D	0.083	0.107	2.10	2.72
E	0.394	0.417	10.01	10.60
F (DIA)	0.140	0.157	3.55	4.00
G	0.100	0.118	2.54	3.00
H	0.230	0.270	5.85	6.85
I	0.560	0.625	14.23	15.87
J	-	0.250	-	6.35
K	0.025	0.038	0.64	0.96
L	0.500	0.579	12.70	14.70
M	0.090	0.110	2.29	2.79

TO-220 (REV: R2)

LEAD CODE:
1) Base
2) Collector
3) Emitter
Tab) Collector

MARKING:
FULL PART NUMBER