

2N6676  
2N6677  
2N6678

**NPN SILICON  
POWER TRANSISTOR**



**TO-3 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 2N6676 SERIES types are NPN Silicon Power Transistors designed for high voltage switching applications.

**MARKING: FULL PART NUMBER**

**MAXIMUM RATINGS:** ( $T_C=25^\circ\text{C}$ )

	SYMBOL	2N6676	2N6677	2N6678	UNITS
Collector-Emitter Voltage	$V_{CEV}$	450	550	650	V
Collector-Emitter Voltage	$V_{CEO}$	300	350	400	V
Emitter-Base Voltage	$V_{EBO}$		8.0		V
Continuous Collector Current	$I_C$		15		A
Peak Collector Current	$I_{CM}$		20		A
Continuous Base Current	$I_B$		5.0		A
Power Dissipation	$P_D$		175		W
Operating and Storage Junction Temperature	$T_J, T_{stg}$		-65 to +200		$^\circ\text{C}$
Thermal Resistance	$\theta_{JC}$		1.0		$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS:** ( $T_C=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
$I_{CEV}$	$V_{CE}=\text{Rated } V_{CEV}, V_{BE(\text{off})}=1.5\text{V}$		100	$\mu\text{A}$
$I_{CEV}$	$V_{CE}=\text{Rated } V_{CEV}, V_{BE(\text{off})}=1.5\text{V}, T_C=100^\circ\text{C}$		1.0	mA
$I_{EBO}$	$V_{EB}=8.0\text{V}$		2.0	mA
$BV_{CEO}$	$I_C=200\text{mA}$ (2N6676)	300		V
$BV_{CEO}$	$I_C=200\text{mA}$ (2N6677)	350		V
$BV_{CEO}$	$I_C=200\text{mA}$ (2N6678)	400		V
$V_{CE(\text{SAT})}$	$I_C=15\text{A}, I_B=3.0\text{A}$		1.5	V
$V_{BE(\text{SAT})}$	$I_C=15\text{A}, I_B=3.0\text{A}$		1.5	V
$h_{FE}$	$V_{CE}=3.0\text{V}, I_C=15\text{A}$	8.0		
$C_{ob}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		500	pF
$f_t$	$V_{CE}=10\text{V}, I_C=1.0\text{A}, f=5.0\text{MHz}$	3.0	10	MHz
$t_d$	$V_{CC}=200\text{V}, I_C=15\text{A}, I_{B1}=I_{B2}=3.0\text{A}$ $t_p=20\mu\text{s}, \text{Duty Cycle}\leq 2.0\%$ $V_{BB}\approx 6.0\text{V}, R_L=13.5\Omega$		0.1	$\mu\text{s}$
$t_r$			0.6	$\mu\text{s}$
$t_s$			2.5	$\mu\text{s}$
$t_f$			0.5	$\mu\text{s}$

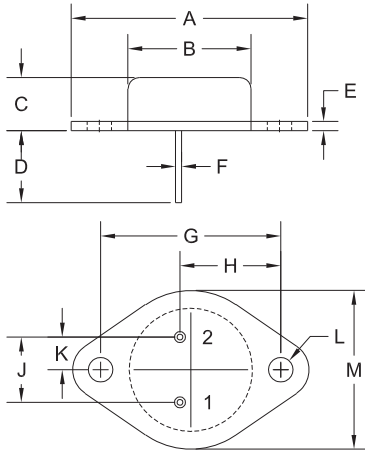
R0 (26-July 2010)

2N6676  
2N6677  
2N6678

NPN SILICON  
POWER TRANSISTOR



TO-3 CASE - MECHANICAL OUTLINE



SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	1.516	1.573	38.50	39.96
B (DIA)	0.748	0.875	19.00	22.23
C	0.250	0.450	6.35	11.43
D	0.433	0.516	11.00	13.10
E	0.054	0.065	1.38	1.65
F	0.035	0.045	0.90	1.15
G	1.177	1.197	29.90	30.40
H	0.650	0.681	16.50	17.30
J	0.420	0.440	10.67	11.18
K	0.205	0.225	5.21	5.72
L (DIA)	0.151	0.172	3.84	4.36
M	0.984	1.050	25.00	26.67

TO-3 (REV: R2)

R2

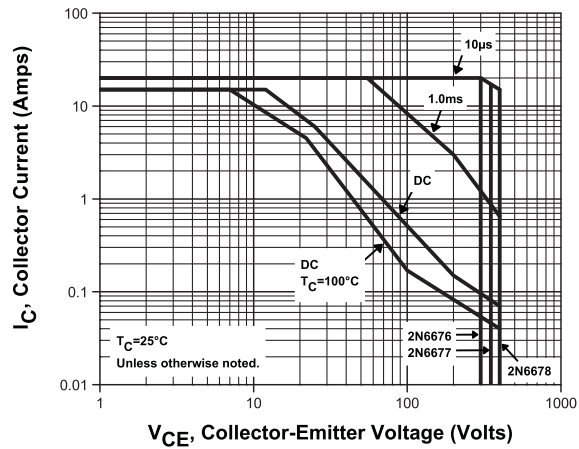
LEAD CODE:

- 1) Base
- 2) Emitter
- Case) Collector

MARKING:

FULL PART NUMBER

Safe Operating Area



R0 (26-July 2010)