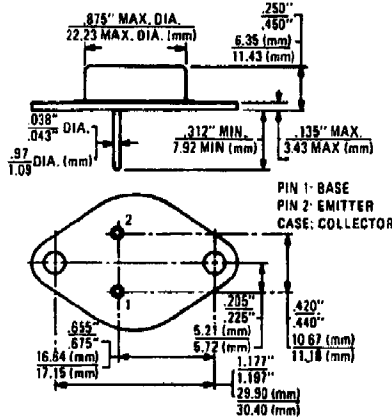


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**2N6579
 2N6580
 2N6581**

**NPN
 350, 400, 450V
 10 AMP SWITCHING
 t_f — 250ns TYPICAL**

(TO-3)

- High Speed
- Off-line Power Supplies
- Motor Speed Control Circuits
- Rugged
- Switching Amplifiers
- Switching Regulators
- Cost Effective
- Inverters/Converters
- Solenoid & Relay Drivers

*MAXIMUM RATINGS ($T_C = 25^\circ\text{C}$ unless otherwise noted)					
RATING	SYMBOL	2N6579	2N6580	2N6581	UNIT
Collector-Base Voltage	V_{CB0}	450	500	550	Volts
Collector-Emitter Voltage	V_{CE0}	350	400	450	Volts
Emitter-Base Voltage	V_{EB0}	9.0	9.0	9.0	Volts
Collector Current—Continuous	I_C	10	10	10	Amps
Peak	I_{CM}	16	16	16	Amps
Base Current—Continuous	I_B	5.0	5.0	5.0	Amps
Total Power Dissipation @ $T_C = 25^\circ\text{C}$	P_D	125	125	125	Watts
Θ_{JC} Junction to Case Thermal Resistance	$R_{\Theta JC}$	1.4	1.4	1.4	$^\circ\text{C/W}$
Operating and Storage Junction Temperature Range	$T_{(top)}$ $T_{(stg)}$	-65 to +200	-65 to +200	-65 to +200	$^\circ\text{C}$

*ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$ unless otherwise noted)								
SYMBOL	CONDITIONS	2N6579		2N6580		2N6581		Unit
		Min	Max	Min	Max	Min	Max	
$V_{CE(sat)}$	$I_C = 200\text{mA}$	350	—	400	—	450	—	Volts
I_{CEV}	$V_{CB} = \text{rated } V_{CB0}, V_{EB} = 1.5\text{V}$	—	500	—	500	—	500	μA
$I_{CEV 100^\circ\text{C}}$	$V_{CB} = \text{rated } V_{CB0}, V_{EB} = 1.5\text{V}$	—	2.0	—	2.0	—	2.0	mA
I_{EBO}	$V_{EB} = 9.0\text{V}$	—	100	—	100	—	100	μA
I_{VE1}	$V_{CB} = 3.0\text{V}, I_C = 5.0\text{A}$	7.0	35	7.0	35	7.0	35	—
$V_{CE(sat)1}$	$I_C = 5.0\text{A}, I_B = 1.0\text{A}$	—	1.5	—	1.5	—	1.5	Volts
$V_{CE(sat)2}$	$I_C = 10\text{A}, I_B = 5.0\text{A}$	—	3.0	—	3.0	—	3.0	Volts
$V_{CE(sat)3}$	$I_C = 5.0\text{A}, I_B = 1.0\text{A}$	—	1.5	—	1.5	—	1.5	Volts
f_T	$V_{CB} = 10\text{V}, I_C = 1.0\text{A}, f = 10\text{MHz}$	12.5	60	12.5	60	12.5	60	MHz
C_{obo}	$V_{CB} = 10\text{V}, f = 1.0\text{MHz}$	75	250	75	250	75	250	pF
SWITCHING		Typ	Max	Typ	Max	Typ	Max	Unit
t_d^{**}	Resistive Load $V_{CC} = 150\text{V}$ $I_C = 5.0\text{A}, R = 30\Omega$ $I_{B1} = I_{B2} = 1.0\text{A}$ $t_p = 100\mu\text{sec}$	0.04	0.05	0.04	0.05	0.04	0.05	μs
t_r^{**}		0.20	0.50	0.20	0.50	0.20	0.50	μs
t_s		1.70	2.00	1.70	2.00	1.70	2.00	μs
t_f		0.25	0.50	0.25	0.50	0.25	0.50	μs
t_{sv}		1.70	2.00	1.70	2.00	1.70	2.00	μs
t_{inv}	Inductive Load $V_{CLAMP} = 250\text{V}$ $I_C = 5.0\text{A}, L = 100\mu\text{H}$ $I_{B1} = I_{B2} = 1.0\text{A}$ $t_p = 60\mu\text{sec}$	0.22	0.30	0.22	0.30	0.22	0.30	μs
t_{in}		0.15	0.25	0.15	0.25	0.16	0.25	μs
t_c		0.35	0.50	0.35	0.50	0.35	0.50	μs
$t_{sa} 100^\circ\text{C}$		2.50	3.00	2.50	3.00	2.50	3.00	μs
$t_{sv} 100^\circ\text{C}$		0.30	0.50	0.30	0.50	0.30	0.50	μs
$t_{th} 100^\circ\text{C}$		0.20	0.30	0.20	0.30	0.20	0.30	μs
$t_{cs} 100^\circ\text{C}$	0.60	1.00	0.60	1.00	0.60	1.00	μs	

*JEDEC registered data. † Pulse Conditions: Width = 10 μs ; Duty Cycle $\leq 2\%$ (measured using Kelvin connections).

NJ Semi-Conductors reserves the right to change test conditions, parameters limits and package dimensions without notice information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

Quality Semi-Conductors

