

FEATURES

- Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.
- Available as non-RoHS (Sn/Pb plating), standard, and as RoHS by adding "-PBF" suffix.

MAXIMUM RATINGS

Parameter	Symbol	2N6676	2N6677	2N6678	Unit
Collector-base voltage	V_{CBO}	450	550	650	V
Collector-emitter voltage	V_{CEO}	300	350	400	V
Emitter-base voltage	V_{EBO}	8			V
Collector current – continuous	I_C	15			A
Collector current – peak	I_{CM}	20			A
Base current	I_B	5			A
Total power dissipation	P_D	175			W
Junction and storage temperature range	T_J, T_{stg}	-65 to 200			°C

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

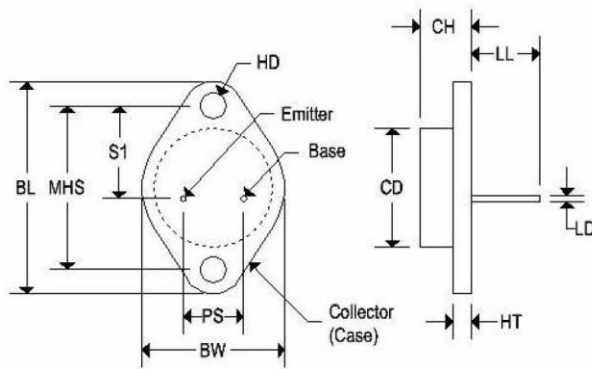
Parameter	Symbol	Conditions	2N6676		2N6677		2N6678		Unit
			Min	Max	Min	Max	Min	Max	
Collector-emitter sustaining voltage	$V_{CE(sus)}$	$I_C = 0.2A, I_B = 0$	300	-	350	-	400	-	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 15A, I_B = 3A$	-	1.5	-	1.5	-	1.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 15A, I_B = 3A$	-	1.5	-	1.5	-	1.5	V
Collector cutoff current	I_{CEV}	$V_{CE} = \text{Rated } v_{CEV}, V_{BE(off)} = -1.5V$ $V_{CE} = \text{Rated } v_{CEV}, V_{BE(off)} = -1.5V, T_C = 100^\circ\text{C}$	-	0.1	-	0.1	-	0.1	mA
			-	1.0	-	1.0	-	1.0	
Emitter cutoff current	I_{EBO}	$V_{EB} = 8V, I_C = 0$	-	2.0	-	2.0	-	2.0	mA
DC current gain	h_{FE}	$I_C = 1.0A, V_{CE} = 5V$ $I_C = 15A, V_{CE} = 3V$	15	50	15	50	15	50	-
			8	-	8	-	8	-	
Output capacitance	C_{ob}	$I_E = 0, V_{CB} = 10V, f = 0.1\text{MHz}$	-	500	-	500	-	500	pF
Transition frequency	f_T	$I_C = 1A, V_{CE} = 10V, f = 5.0\text{MHz}$	3	-	3	-	3	-	°C/W
Delay time	t_d	$I_C = 15A, I_{B1} = -I_{B2} = 3.0A, V_{CC} = 200V, t_p = 20\mu\text{s}, \text{duty cycle} \leq 2\%, V_{BB} = 6V, R_L = 1.35\Omega$	-	0.2	-	0.2	-	0.2	μs
Rise time	t_r		-	0.6	-	0.6	-	0.6	μs
Storage time	t_s		-	2.5	-	2.5	-	2.5	μs
Fall time	t_f		-	0.6	-	0.6	-	0.6	μs
Thermal resistance, junction to case	$R_{\theta JC}$		-	1.0	-	1.0	-	1.0	°C/W

2N6676-2N6678

SILICON NPN TRANSISTORS

MECHANICAL CHARACTERISTICS

Case:	TO-3
Marking:	Alpha-Numeric
Polarity:	See below



	TO-3			
	Inches		Millimeters	
	Min	Max	Min	Max
CD	-	0.875	-	22.220
CH	0.250	0.380	6.860	9.650
HT	0.060	0.135	1.520	3.430
BW	-	1.050	-	26.670
HD	0.131	0.188	3.330	4.780
LD	0.038	0.043	0.970	1.090
LL	0.312	0.500	7.920	12.700
BL	1.550 REF		39.370 REF	
MHS	1.177	1.197	29.900	30.400
PS	0.420	0.440	10.670	11.180
S1	0.655	0.675	16.640	17.150