

isc Silicon NPN Power Transistors

2N6674/6675

DESCRIPTION

- High Power Dissipation
- High Switching Speed
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 300V(\text{Min})$ - 2N6674
= $400V(\text{Min})$ - 2N6675

APPLICATIONS

Designed for high voltage switching applications such as:

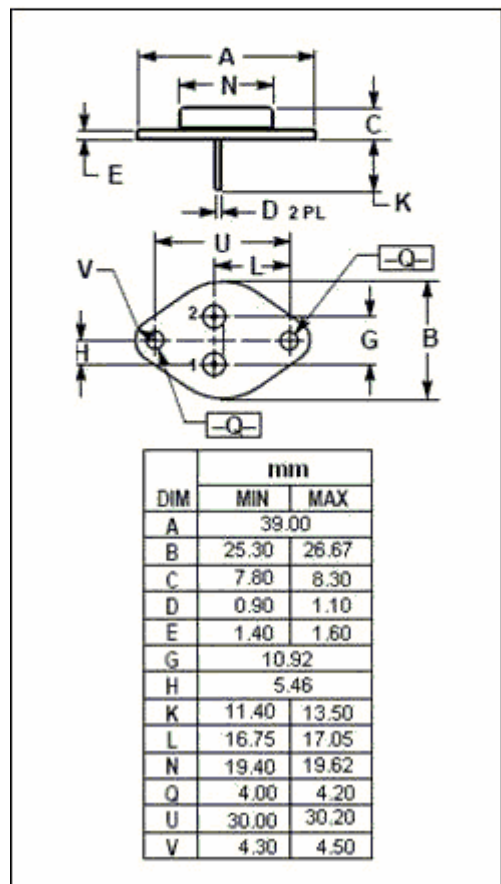
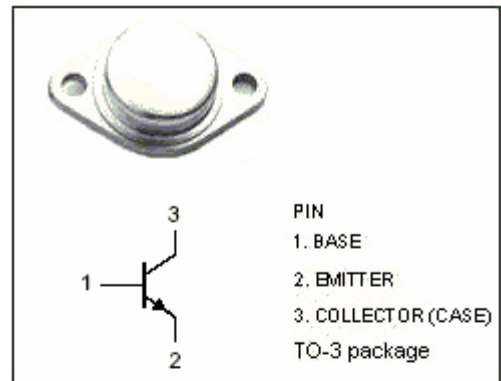
- Switching regulators
- Inverters
- Solenoid and relay drivers
- Deflection circuits

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT	
V_{CBO}	Collector-Base Voltage	2N6674	450	V
		2N6675	650	
V_{CEO}	Collector-Emitter Voltage	2N6674	300	
		2N6675	400	
V_{CEX}	Collector-Emitter Voltage	2N6674	450	V
		2N6675	650	
V_{EBO}	Emitter-Base Voltage	7	V	
I_C	Collector Current-Continuous	15	A	
I_B	Base Current-Continuous	5.0	A	
P_C	Collector Power Dissipation@ $T_a=25^\circ\text{C}$	6	W	
	Collector Power Dissipation@ $T_c=25^\circ\text{C}$	175		
T_J	Junction Temperature	200	$^\circ\text{C}$	
T_{stg}	Storage Temperature	-65~200	$^\circ\text{C}$	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER		CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	2N6674	$I_C=200\text{mA}; I_B=0$	300		V
		2N6675		400		
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage		$I_C=10\text{A}; I_B=2\text{A}$		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage		$I_C=15\text{A}; I_B=5\text{A}$		5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage		$I_C=10\text{A}; I_B=2\text{A}$		1.5	V
I_{CEX}	Collector Cutoff Current	2N6674	$V_{CE}=450\text{V}; V_{BE}=-1.5\text{V}$		0.1	mA
		2N6675	$V_{CE}=650\text{V}; V_{BE}=-1.5\text{V}$		0.1	
I_{CBO}	Collector Cutoff Current	2N6674	$V_{CB}=450\text{V}; I_E=0$		1.0	mA
		2N6675	$V_{CB}=650\text{V}; I_E=0$		1.0	
I_{EBO}	Emitter Cutoff Current		$V_{EB}=7\text{V}; I_C=0$		2.0	mA
h_{FE-1}	DC Current Gain		$I_C=1\text{A}; V_{CE}=3\text{V}$	15	40	
h_{FE-2}	DC Current Gain		$I_C=10\text{A}; V_{CE}=2\text{V}$	8	20	
C_{OB}	Output Capacitance		$I_E=0; V_{CB}=10\text{V}; f_{\text{test}}=1\text{MHz}$		500	pF