

isc Silicon NPN Power Transistors

TIPL765

DESCRIPTION

- 125W at 25°C case temperature
- 10A continue collector current
- High-voltage,high forward and reverse energy
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

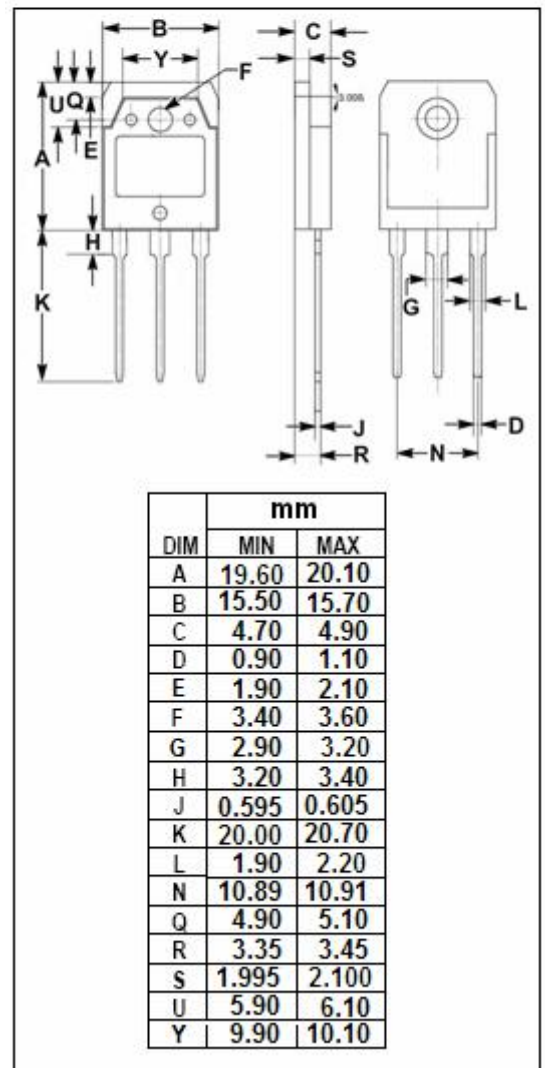
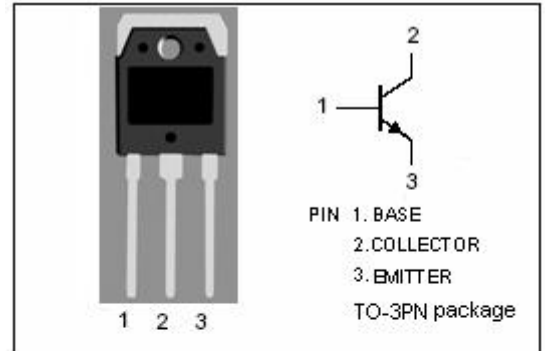
- Designed for automotive ignition and switching regulator applications
- Characterized for operation in ignition and switching regulator Applications

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	850	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current -Continuous	10	A
I_{CM}	Collector Current-peak	15	A
P_C	Collector Power Dissipation@ $T_c=25^{\circ}\text{C}$	125	W
T_j	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-65~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance,Junction to Case	1	$^{\circ}\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}^*$	Collector-Emitter Sustaining Voltage	$I_C=30\text{mA}; I_B=0$	400		V
$V_{CE(sat)-1}^*$	Collector-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.4\text{A}$		0.5	V
$V_{CE(sat)-2}^*$	Collector-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$		1.0	V
$V_{CE(sat)-3}^*$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=2\text{A}$		2.5	V
$V_{BE(sat)-1}^*$	Base-Emitter Saturation Voltage	$I_C=2\text{A}; I_B=0.4\text{A}$		1.1	V
$V_{BE(sat)-2}^*$	Base-Emitter Saturation Voltage	$I_C=5\text{A}; I_B=1\text{A}$		1.3	V
$V_{BE(sat)-3}^*$	Base-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=2\text{A}$		1.7	V
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$		1	mA
h_{FE}^*	DC Current Gain	$I_C=0.5\text{A}; V_{CE}=5\text{V}$	15	60	

*:Pulse test $PW\leq 300\mu\text{s}$, duty cycle $\leq 1.5\%$

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