



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Low $V_{CE(SAT)}$ PNP Transistor

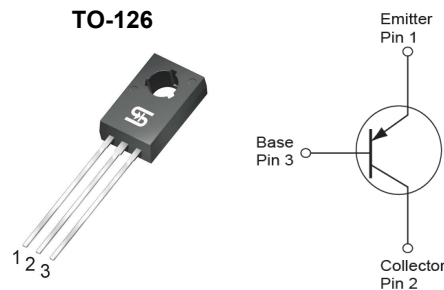
FEATURES

- Low $V_{CE(SAT)}$ -0.3 @ $I_C = -2A, I_B = -200mA$ (Typ.)
- Complementary part with TSD882
- Epitaxial Planar Type
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC.
- Halogen-free according to IEC 61249-2-21

APPLICATION

- Power Supply
- Low Speed Switching Applications

KEY PERFORMANCE PARAMETERS			
PARAMETER		VALUE	UNIT
BV_{CEO}		-30	V
BV_{CBO}		-50	V
I_C		-3	A
$V_{CE(SAT)}$	$I_C = -2A, I_B = -200mA$	-0.5	V



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ C$ unless otherwise noted)				
PARAMETER		SYMBOL	LIMIT	UNIT
Collector-Base Voltage		V_{CBO}	-50	V
Collector-Emitter Voltage		V_{CEO}	-30	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current	DC	I_C	-3	A
	Pulse		-7 (note)	
Collector Power Dissipation	$T_A = 25^\circ C$	P_D	1	W
	$T_C = 25^\circ C$		10	
Operating Junction Temperature		T_J	+150	$^\circ C$
Operating Junction and Storage Temperature Range		T_{STG}	- 55 to +150	$^\circ C$

Note: Single pulse, $P_w \leq 350\mu s$, Duty $\leq 2\%$

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	LIMIT	UNIT
Junction to Case Thermal Resistance	$R_{\theta JC}$	6.25	$^\circ C/W$

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

PARAMETER	CONDITIONS	SYMBOL	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$I_C = -50\mu\text{A}, I_E = 0$	BV_{CBO}	-50	--	--	V
Collector-Emitter Breakdown Voltage	$I_C = -1\text{mA}, I_B = 0$	BV_{CEO}	-30	--	--	V
Emitter-Base Breakdown Voltage	$I_E = -50\mu\text{A}, I_C = 0$	BV_{EBO}	-5	--	--	V
Collector Cutoff Current	$V_{CB} = -30\text{V}, I_E = 0$	I_{CBO}	--	--	-1	μA
Emitter Cutoff Current	$V_{EB} = -33\text{V}, I_C = 0$	I_{EBO}	--	--	-1	μA
Collector-Emitter Saturation Voltage	$I_C = -2\text{A}, I_B = -200\text{mA}$	$*V_{CE(SAT)}$	--	-0.3	-0.5	V
Base-Emitter Saturation Voltage	$I_C = -2\text{A}, I_B = -200\text{mA}$	$*V_{BE(SAT)}$	--	-1	-2	V
DC Current Transfer Ratio	$V_{CE} = -2\text{V}, I_C = -1\text{A}$	$*h_{FE}$	100	--	500	
Transition Frequency	$V_{CE} = -5\text{V}, I_C = -100\text{mA},$ $f = 100\text{MHz}$	f_T	--	80	--	MHz
Output Capacitance	$V_{CB} = -10\text{V}, f = 1\text{MHz}$	C_{ob}	--	55	--	pF
Collector Cutoff Current	$V_{CB} = -30\text{V}, I_E = 0$	I_{CBO}	--	--	-1	μA

* Pulse Test: Pulse Width $\leq 380\mu\text{s}$, Duty Cycle $\leq 2\%$

ORDERING INFORMATION

PART NO.	PACKAGE	PACKING
TSB772CK B0G	TO-126	250pcs / Bulk Bag
TSB772CK C0G	TO-126	50pcs / Tube

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

Figure 1. DC Current Gain

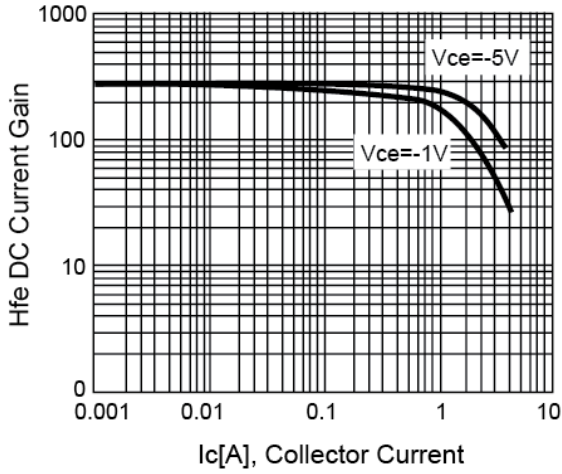


Figure 2. $V_{CE(SAT)}$ vs. Collector Current

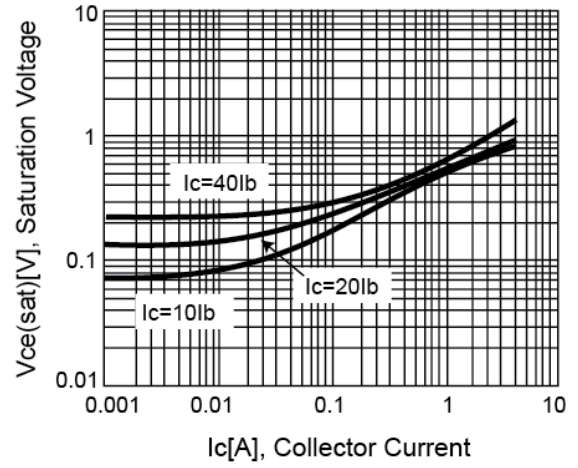


Figure 3. $V_{BE(SAT)}$ vs. Collector Current

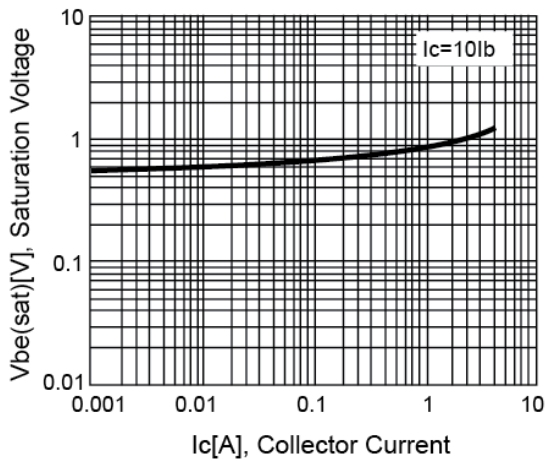
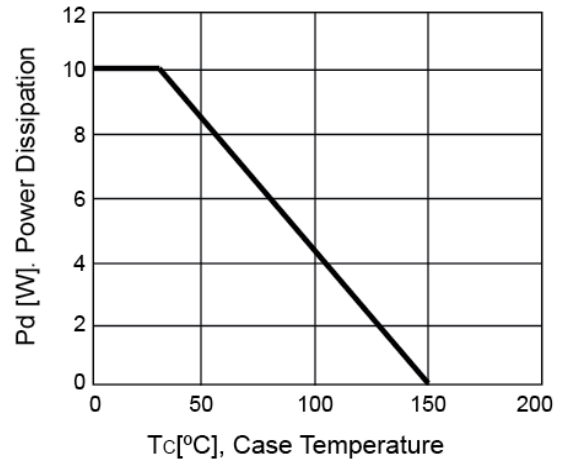
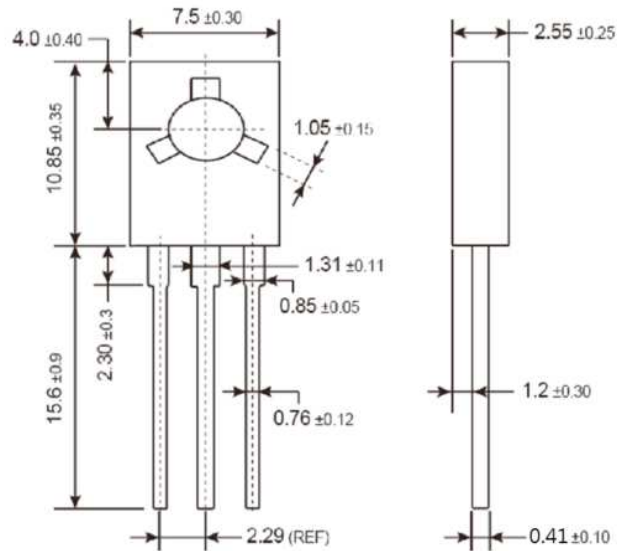


Figure 4. Power Derating Curve

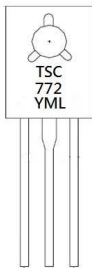


PACKAGE OUTLINE DIMENSIONS (Unit: Millimeters)

TO-126



MARKING DIAGRAM



- Y** = Year Code
- M** = Month Code for Halogen Free Product
 - O** =Jan **P** =Feb **Q** =Mar **R** =Apr
 - S** =May **T** =Jun **U** =Jul **V** =Aug
 - W** =Sep **X** =Oct **Y** =Nov **Z** =Dec
- L** = Lot Code

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