

**SEMICONDUCTOR
TECHNICAL DATA**

KTD1145

EPITAXIAL PLANAR NPN TRANSISTOR

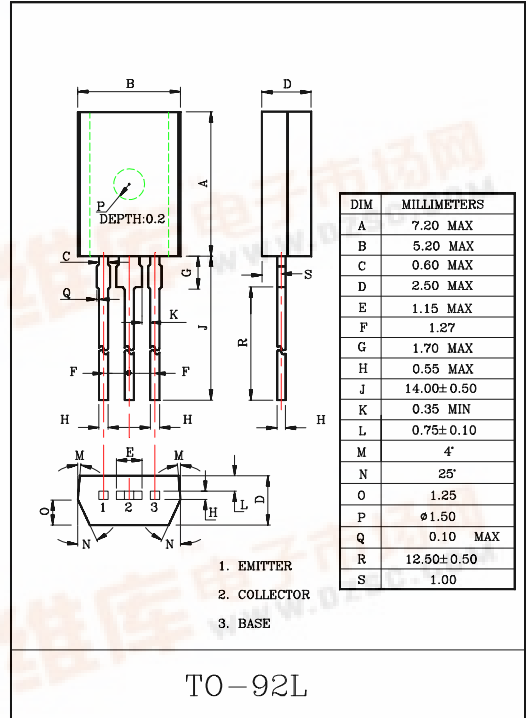
RELAY DRIVE, HAMMER DIRVE, LAMP DRIVE.
STROBO, DC-DC CONVERTER, MOTOR DRIVE.

FEATURES

- Low Saturation Voltage.
: $V_{CE(sat)}=0.5V(\text{Max.})$ ($I_C=3A, I_B=60mA$).
- High Collector Current.
: $I_C=5A, I_{CP}(\text{Peak Current})=8A$.
- Wide ASO.

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	60	V
Collector-Emitter Voltage		V_{CEO}	20	V
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current	DC	I_C	5	A
	Pulse (Note1)	I_{CP}	8	
Collector Power Dissipation		P_C	1	W
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$



Note 1: Pulse Width $\leq 100\text{mS}$, Duty Cycle $\leq 30\%$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB}=50V, I_E=0$	-	-	100	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V, I_C=0$	-	-	100	nA
DC Current Gain	$h_{FE(1)}$ (Note 1)	$V_{CE}=2V, I_C=0.5A$	140	-	600	
	$h_{FE(2)}$	$V_{CE}=2V, I_C=3A$ (Pulse)	75	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3A, I_B=60mA$ (Pulse)	-	-	0.5	V
Transition Frequency	f_T	$V_{CE}=10V, I_C=50mA$	-	120	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1\text{MHz}$	-	27	-	pF

Note 1 : $h_{FE(1)}$ Classification A:140~240, B:200~330, C:300~450, D:420~600



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