

SEMICONDUCTOR TECHNICAL DATA

KTN2369/A EPITAXIAL PLANAR NPN TRANSISTOR

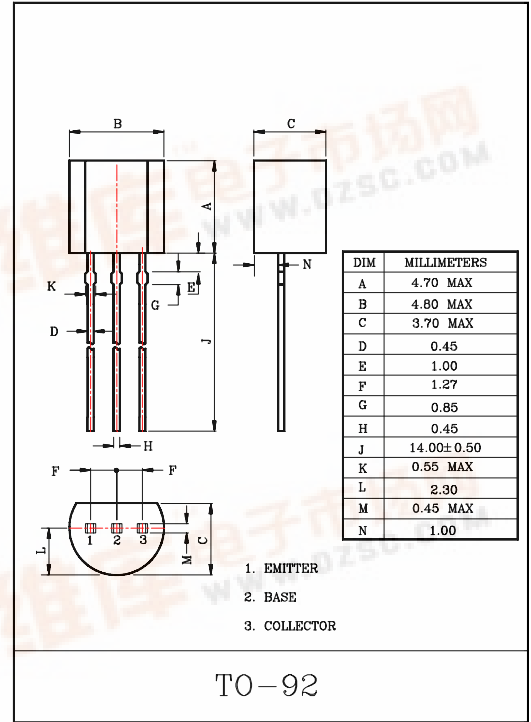
HIGH SPEED SWITCHING APPLICATION.

FEATURES

- High Frequency Characteristics
: $f_T=500\text{MHz}$ (Min.) ($V_{CE}=10\text{V}$, $f=100\text{MHz}$, $I_C=10\text{mA}$).
- Excellent Switching Characteristics.
- KTN2369/2369A Electrically Similar to 2N2369/2369A.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	40	V
Collector-Emitter Voltage	V_{CEO}	15	V
Emitter-Base Voltage	V_{EBO}	4.5	V
Collector Current	I_C	500	mA
Collector Power Dissipation ($T_a=25^\circ\text{C}$)	P_C	625	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$



KTN2369/A

ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		I _{CBO}	V _{CB} =20V, I _E =0	-	-	0.4	μA
			V _{CB} =20V, I _E =0, Ta=125°C	-	-	30	
Collector-Base Breakdown Voltage		V _{(BR)CBO}	I _C =10μA, I _E =0	40	-	-	V
Collector-Emitter Breakdown Voltage *		V _{(BR)CEO}	I _E =10mA, I _B =0	15	-	-	
Emitter-Base Breakdown Voltage		V _{(BR)EBO}	I _E =10μA, I _C =0	4.5	-	-	
DC Current Gain *	KTN2369	h _{FE}	I _C =10mA, V _{CE} =1.0V	40	-	120	
	KTN2369A			-	-	120	
	KTN2369		I _C =10mA, V _{CE} =1.0V, Ta=-55°C	20	-	-	
	KTN2369A		I _C =10mA, V _{CE} =0.35V, Ta=-55°C	20	-	-	
	KTN2369		I _C =100mA, V _{CE} =2.0V	20	-	-	
	KTN2369A		I _C =100mA, V _{CE} =1.0V	20	-	-	
Collector-Emitter Saturation Voltage *		V _{CE(sat)}	I _C =10mA, I _B =1.0mA	-	-	0.25	V
Base-Emitter Saturation Voltage *		V _{BE(sat)}	I _C =10mA, I _B =1.0mA	0.70	-	0.85	V
Transition Frequency		f _T	I _C =10mA, V _{CE} =10V, f=100MHz	500	-	-	MHz
Collector Output Capacitance		C _{ob}	V _{CB} =5.0V, I _E =0, f=1.0MHz	-	-	4.0	pF
Storage Time	KTN2369A	T _{stg}	I _C =100mA, I _{B1} =-I _{B2} =10mA, V _{CC} =10V	-	-	13	nS
Turn-on Time		t _{on}	V _{CC} =3.0V, I _C =10mA, I _{B1} =3.0mA, I _{B2} =-1.5mA	-	-	12	
Turn-off Time	KTN2369A	t _{off}	I _C =10mA, I _{B1} =3.0mA, I _{B2} =-1.5mA, V _{CC} =3.0V	-	-	15	

Note : *Pulse Test : Pulse Width ≤300μS, Duty Cycle ≤2.0%