

## SEMICONDUCTOR TECHNICAL DATA

## KTC1020 EPITAXIAL PLANAR NPN TRANSISTOR

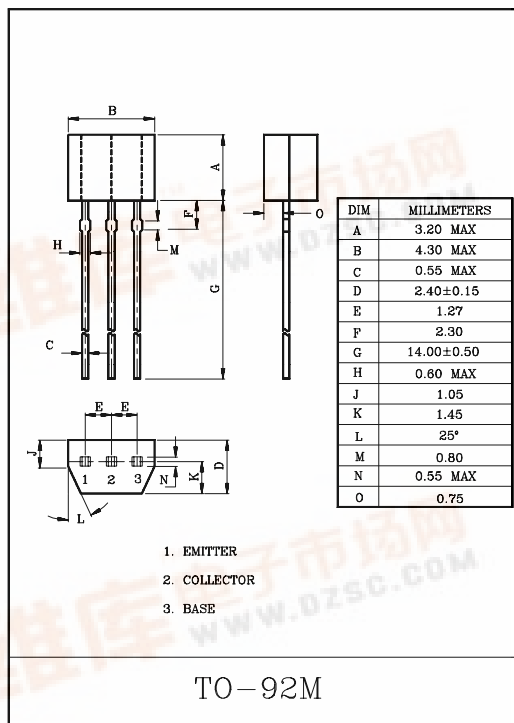
GENERAL PURPOSE APPLICATION.  
SWITCHING APPLICATION.

### FEATURES

- Excellent  $h_{FE}$  Linearity  
:  $h_{FE}(2)=25$ Min. :  $V_{CE}=6V$ ,  $I_C=400mA$ .
- 1 Watt Amplifier Application.
- Complementary to KTA1021.

### MAXIMUM RATINGS ( $T_a=25^\circ C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	35	V
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	500	mA
Emitter Current	$I_E$	-500	mA
Collector Power Dissipation	$P_C$	400	mW
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$



### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=35V$ , $I_E=0$	-	-	0.1	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB}=5V$ , $I_C=0$	-	-	0.1	$\mu A$
DC Current Gain	$h_{FE}(1)$	$V_{CE}=1V$ , $I_C=100mA$	100	-	240	
	$h_{FE}(2)$	$V_{CE}=6V$ , $I_C=400mA$	25	-	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=100mA$ , $I_B=10mA$	-	0.1	0.25	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE}=1V$ , $I_C=100mA$	-	0.8	1.0	V
Transition Frequency	$f_T$	$V_{CB}=6V$ , $I_C=20mA$	-	300	-	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB}=6V$ , $I_E=0$ , $f=1MHz$	-	7.0	-	pF

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