

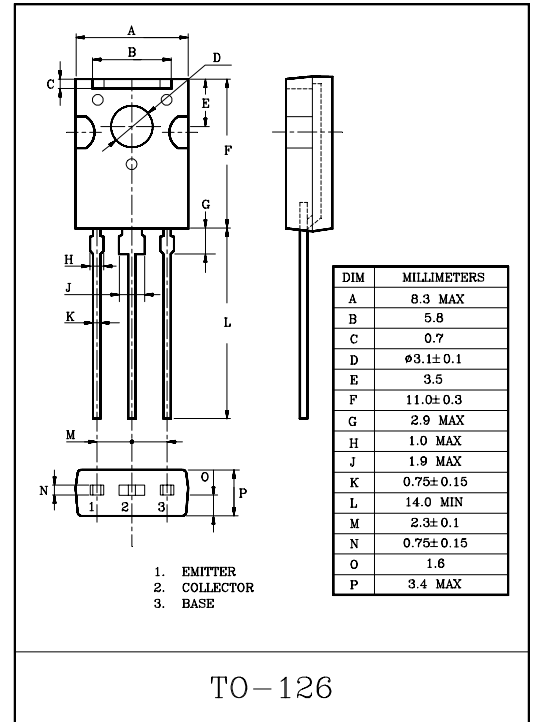
LOW FREQUENCY POWER AMP,
MEDIUM SPEED SWITCHING APPLICATIONS

FEATURES

- High breakdown voltage V_{CE0} 120V, high current 1A.
- Low saturation voltage and good linearity of h_{FE} .

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	120	V
Collector-Emitter Voltage		V_{CEO}	120	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	1	A
		I_{CP}	2	
Collector Power Dissipation	$T_a=25^\circ\text{C}$	P_C	1.5	W
	$T_c=25^\circ\text{C}$		8	
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$



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

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut of Current		I_{CBO}	$V_{CB}=50V, I_E=0$	-	-	1	μA
Emitter Cut of Current		I_{EBO}	$V_{EB}=4V, I_C=0$	-	-	1	μA
Collector-Base Breakdown Voltage		$V_{(BR)CBO}$	$I_C=10\mu\text{A}$	120	-	-	V
Collector-Emitter Breakdown Voltage		$V_{(BR)CEO}$	$I_C=1\text{mA}$	120	-	-	V
Emitter-Base Breakdown Voltage		$V_{(BR)EBO}$	$I_E=10\mu\text{A}$	5	-	-	V
DC Current Gain	$h_{FE(1)}$ Note		$V_{CE}=5V, I_C=50\text{mA}$	100	-	320	
	$h_{FE(2)}$		$V_{CE}=5V, I_C=500\text{mA}$	20	-	-	
Gain Bandwidth Product		f_T	$V_{CE}=10V, I_C=50\text{mA}$	-	130	-	MHz
Output Capacitance		C_{ob}	$V_{CB}=10V, f=1\text{MHz}$	-	20	-	pF
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	0.15	0.4	V
Base-Emitter Saturation Voltage		$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}$	-	0.85	1.2	V
Switching Time	Turn-on Time	t_{on}	<p style="text-align: center;">$V_{CB}=12V$ $I_C=10I_{B1}=-10I_{B2}=500\text{mA}$</p>	-	100	-	nS
	Turn-off Time	t_{off}		-	500	-	
	Storage Time	t_{stg}		-	700	-	

(Note) : $h_{FE(1)}$ Classification Y:100~200, GR:160~320

KTD600K

