

KEC

SEMICONDUCTOR
TECHNICAL DATA

MJD112/L

EPITAXIAL PLANAR NPN TRANSISTOR

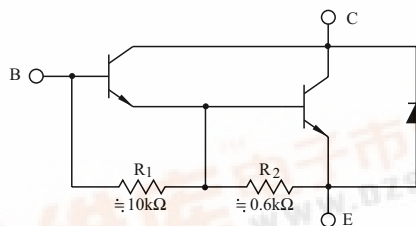
MONOLITHIC CONSTRUCTION WITH BUILT IN
BASE-EMITTER SHUNT RESISTORS INDUSTRIAL USE.

FEATURES

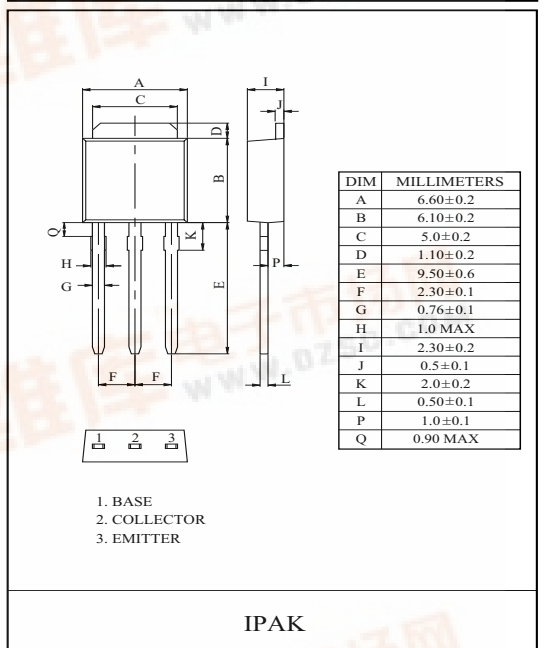
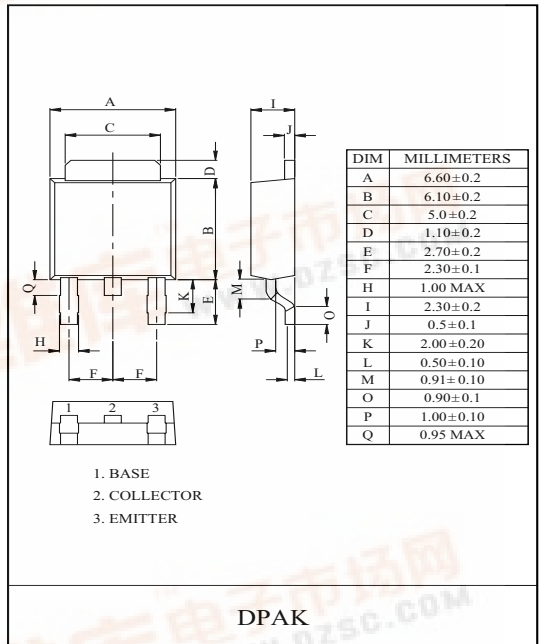
- High DC Current Gain.
: $h_{FE}=1000(\text{Min.})$, @ $V_{CE}=4V$, $I_C=1A$.
- Low Collector-Emitter Saturation Voltage.
- Straight Lead (IPAK, "L" Suffix)
- Complementary to MJD117/L.

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	100	V
Collector-Emitter Voltage		V_{CEO}	100	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	2	A
	Pulse		4	
Base Current	DC	I_B	50	mA
Collector Power Dissipation	$T_a=25^\circ\text{C}$	P_C	1.0	W
	$T_c=25^\circ\text{C}$		20	
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-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C=30\text{mA}$, $I_B=0$	100	-	-	V
Collector Cut-off Current	I_{CEO}	$V_{CE}=50V$, $I_B=0$	-	-	20	μA
	I_{CBO}	$V_{CB}=100V$, $I_E=0$	-	-	20	
Emitter Cut-off Current	I_{EBO}	$V_{EB}=5V$, $I_C=0$	-	-	2	mA
DC Current Gain	h_{FE}	$V_{CE}=3V$, $I_C=0.5A$	500	-	-	
		$V_{CE}=3V$, $I_C=2A$	1,000	12,000	-	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2A$, $I_B=8\text{mA}$	-	-	2.0	V
Base-Emitter On Voltage	$V_{BE(ON)}$	$V_{CE}=3V$, $I_C=2A$	-	-	2.8	V
Current Gain Bandwidth Product	f_T	$V_{CE}=10V$, $I_C=0.75A$, $f=1\text{MHz}$	25	-	-	MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10V$, $I_E=0$, $f=0.1\text{MHz}$	-	-	100	pF



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