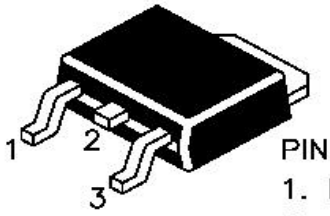
COMPLEMENTARY DARLINGTON PLASTIC POWER TRANSISTORS

MJD122 NPN
MJD127 PNP

DPAK (TO-252)
Plastic Package



PIN CONFIGURATION
1. BASE
2. COLLECTOR
3. EMITTER

Designed for General Purpose Amplifier and Low Speed Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	100	V
Collector Emitter Voltage	V_{CEO}	100	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current Continuous	I_C	8	A
Collector Current Peak	I_C	16	A
Base Current	I_B	120	mA
Total Power Dissipation T_c=25ºC Derate Above 25ºC	P_D	20 0.16	W W/ºC
Operating and Storage Junction Temperature Range	$T_{j, Tstg}$	- 65 to +150	ºC

THERMAL CHARACTERISTICS

Junction to Case	$R_{th\ (j-c)}$	6.25	ºC/W

ELECTRICAL CHARACTERISTICS (T_c=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Emitter Sustaining Voltage	V_{CEO}	I_C=30mA, I_B=0	100			V
Collector Cut Off Current	I_{CEO}	V_{CE}=50V, I_B=0			10	µA
Collector Cut Off Current	I_{CBO}	V_{CB}=100V, I_E=0			10	µA
Emitter Cut Off Current	I_{EBO}	V_{EB}=5V, I_C=0			2	mA
DC Current Gain	h_{FE}	I_C=4A, V_{CE}=4V I_C=8A, V_{CE}=4V	1000 100		12000	
Collector Emitter Saturation Voltage	$V_{CE\ (sat)}$	I_C=4A, I_B=16mA I_C=8A, I_B=80mA			2 4	V V
Base Emitter Saturation Voltage	*$V_{BE\ (sat)}$	I_C=8A, I_B=80mA			4.5	V
Base Emitter On Voltage	$V_{BE\ (on)}$	I_C=4A, V_{CE}=4V			2.8	V

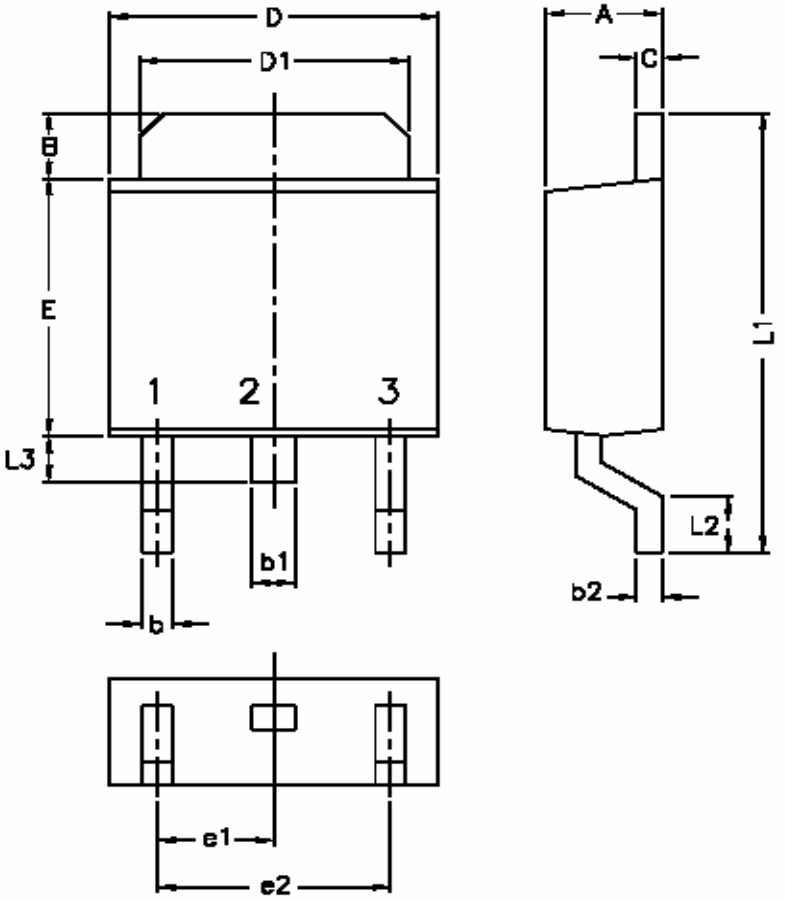
DYNAMIC CHARACTERISTICS

Current Gain Bandwidth product	$\lvert h_{fe} \rvert$	V_{CE}=4V, I_C=3A, f=1MHz	4			MHz
Output Capacitance	C_{ob}	I_E=0, V_{CB}=10V, f=0.1MHz **MJD127** **MJD122**			 300 200	 pF pF
Small Signal Current Gain	h_{fe}	I_C=3A, V_{CE}=4V, f=1kHz	300			

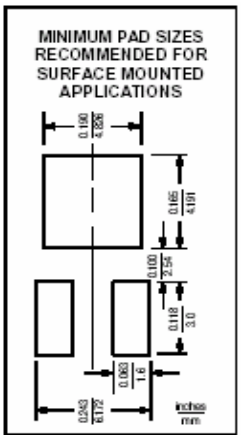
***Pulse test: Pulse width ≤ 300µs, duty cycle ≤ 2%**

MJD122_127 Rev290704E

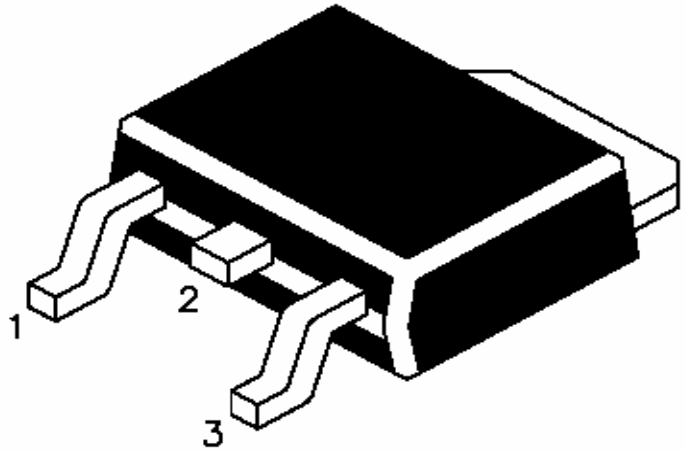
PACKAGE DPAK



DIM	MIN.	MAX.
A	2.18	2.43
B	0.889	1.50
b	0.550	0.889
b1	0.75	0.85
b2	0.46	0.56
C	0.46	0.56
D	6.35	6.75
D1	4.95	5.46
E	5.40	6.22
e1	2.25	2.35
e2	4.50	4.70
L1	9.25	9.75
L2	0.5	–
L3	0.90	1.10



ALL DIMENSIONS ARE IN mm



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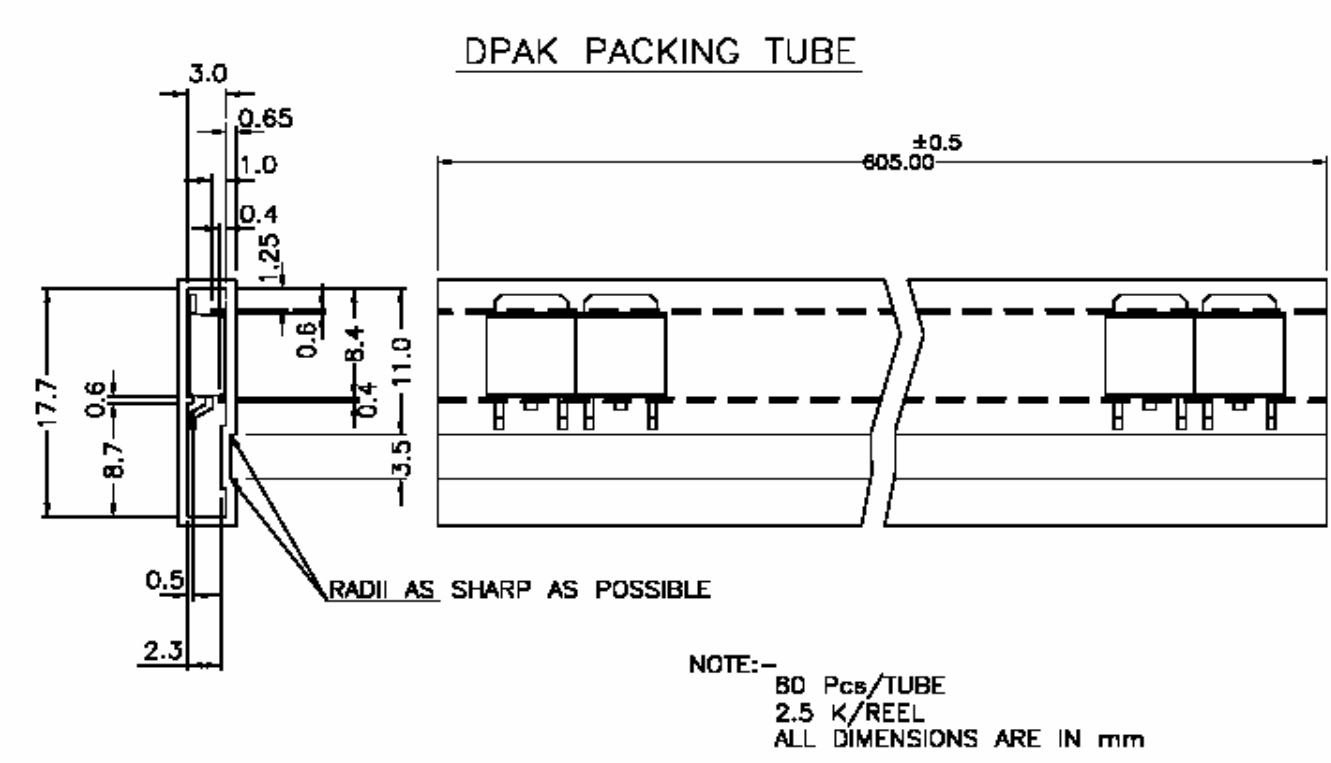

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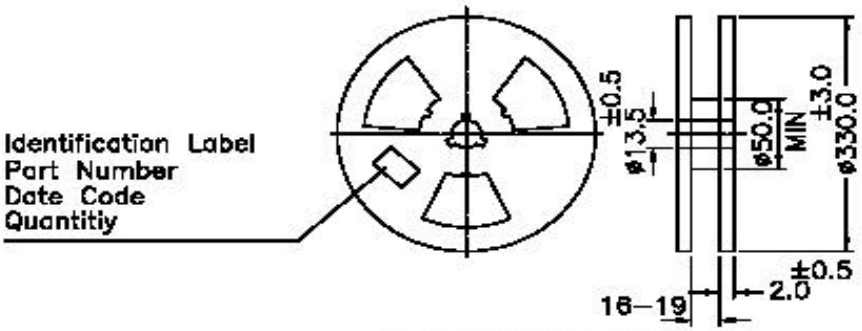
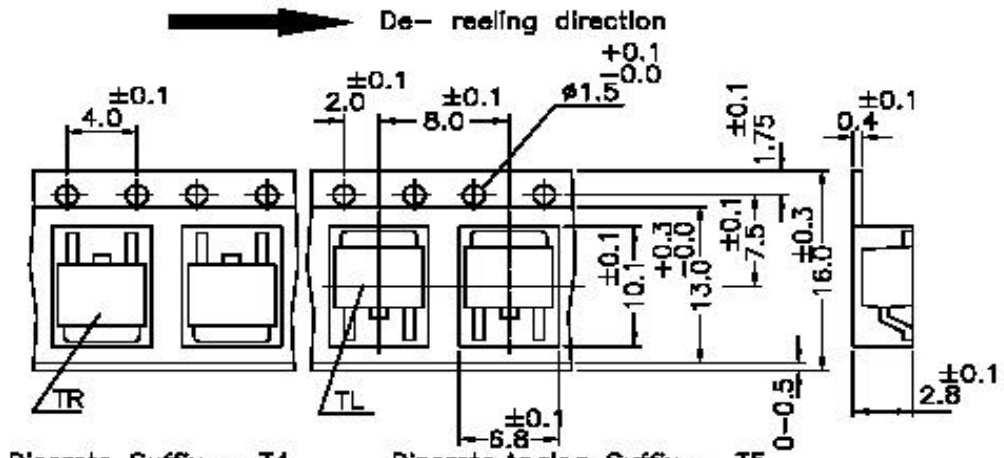
DPAK TAPE & REEL SPECIFICATION



ALL DIMENSIONS ARE IN mm
REEL ø 330 mm (13")
No of Device 2500

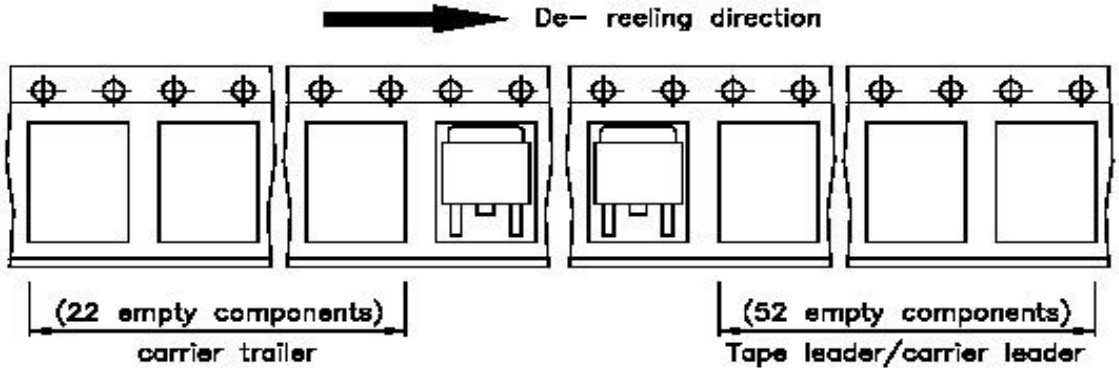
TAPE & REEL



Discrete Suffix – T4
Analog Suffix – RK

Discrete,Analog Suffix – T5

Notes:–
A maximum of three consecutive components may be missing. Provided this gap is followed by six consecutive components.



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Disclaimer

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