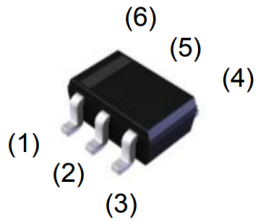
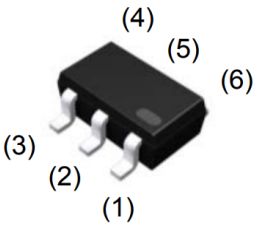
Digital Transistors (Built-in Resistors)

SOT23-6L

• **Equivalent Circuit**



UMH8N



IMH8A

DIGITAL TRANSISTOR (NPN)

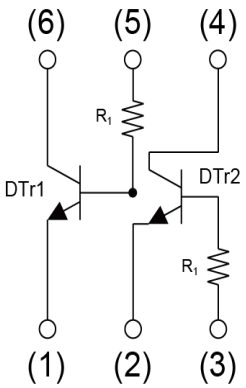
FEATURES

- Two DTC114T chips in a UMT or SMT package.
- Mounting possible with UMT3 or SMT3 automatic mounting machines.
- Transistor elements are independent, eliminating interference.
- Mounting cost and area can be cut in half.

Ilnner circuit

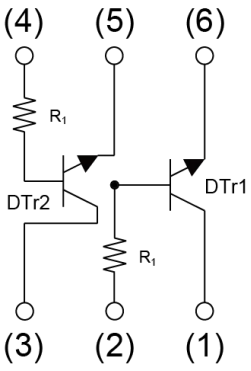
UMH8N

(1) DTr1 Emitter
(2) DTr2 Emitter
(3) DTr2 Base
(4) DTr2 Collector
(5) DTr1 Base
(6) DTr1 Collector



IMH8A

(1) DTr1 Collector
(2) DTr1 Base
(3) DTr2 Collector
(4) DTr2 Base
(5) DTr2 Emitter
(6) DTr1 Emitter



ORDERING INFORMATION

Part Number	MARKING	Package	Packing Method	Pack Quantity
UMH8N	H8	SOT-23-6L	Reel	3000pcs/Reel
IMH8A	H8	SOT-23-6L	Reel	3000pcs/Reel

MAXIMUM RATINGS(Ta=25℃ unless otherwise noted)

Symbol	Parameter	Values	Unit
V_{CC}	Supply Voltage	50	V
V_{IN}	Input Voltage	-7～+20	V
I_O	Output Current	100	mA
P_D	Power Dissipation	150	mW
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55～+150	℃

ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	Ic=50μA,I_E=0	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	Ic=1mA,I_B=0	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=50μA,I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}=50V,I_E=0			0.5	μA
Emitter cut-off current	I_{EBO}	V_{EB}=4V,I_C=0			0.5	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=10mA,I_B=1mA			0.3	V
DC current gain	h_{FE}	V_{CE}=5V,I_C=1mA	100	300	600	
Input resistor	R_1		7	10	13	kΩ
Transition frequency	f_T	V_{CE}=10V,I_E=-5mA, f=100MHz		250		MHz

Typical Characteristi