

Digital Transistors

Two transistors with built-in resistors (digital transistors) in UM6 type and IMD type packages. The two digital transistors are completely independent from each other. By making use of element saving feature, external circuit can be in any configuration.

UM6 · IMD (6 pin type including 2 independent circuits)

● Built-in 2 resistors

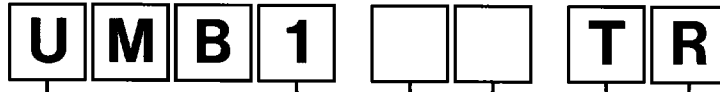
Equivalent circuit		Application	Package		Equivalent product	Resistance value		V _{CC} (V)	I _o (mA)	G _I	V _o (V)	I _o (mA)
TOP VIEW			UM6	IMD		R ₁ (kΩ)	R ₂ (kΩ)					
UM6	IMD		Part No.									
		Inverter Driver	UMB1	IMB1A	DTA124EK × 2	22	22	-50	-30	56~	-5	-5
			UMB2	IMB2A	DTA144EK × 2	47	47	-50	-30	68~	-5	-5
			UMB9	IMB9A	DTA114YK × 2	10	47	-50	-70	68~	-5	-5
			UMB10	IMB10A	DTA123JK × 2	2.2	47	-50	-100	80~	-5	-10
			UMB11	IMB11A	DTA114EK × 2	10	10	-50	-50	30~	-5	-5
			UMB5	IMB5A	DTA124EK × 2	22	22	-50	-30	56~	-5	-5
			UMB6	IMB6A	DTA144EK × 2	47	47	-50	-30	68~	-5	-5
			UMH1	IMH1A	DTC124EK × 2	22	22	50	30	56~	5	5
			UMH2	IMH2A	DTC144EK × 2	47	47	50	30	68~	5	5
			UMH9	IMH9A	DTC114YK × 2	10	47	50	70	68~	5	5
			UMH10	IMH10A	DTC123JK × 2	2.2	47	50	100	80~	5	10
			UMH11	IMH11A	DTC114EK × 2	10	10	50	50	30~	5	5
			UMH5	IMH5A	DTC124EK × 2	22	22	50	30	56~	5	5
			UMH6	IMH6A	DTC144EK × 2	47	47	50	30	68~	5	5
			UMD2	IMD2A	DTA124EK DTC124EK	22 22	22 22	-50 50	-30 30	56~ 56~	-5 5	-5 5
			UMD3	IMD3A	DTA114EK DTC114EK	10 10	10 10	-50 50	-50 50	30~ 30~	-5 5	-5 5
		-	IMD9A	DTA114YK DTC114YK	10 10	47 47	-50 50	-70 70	68~ 68~	-5 5	-5 5	

● Built-in 1 resistor

Equivalent circuit		Application	Package		Equivalent product	Resistance value R ₁ (kΩ)	V _{CE0} (V)	I _c (mA)	h _{FE}	V _o (V)	I _o (mA)
TOP VIEW			UM6	IMD							
UM6	IMD		Part No.								
		Inverter Driver	UMB3	IMB3A	DTA143TK × 2	4.7	-50	-100	100~600	-5	-1
			UMB4	IMB4A	DTA114TK × 2	10	-50	-100	100~600	-5	-1
			UMB7	IMB7A	DTA143TK × 2	4.7	-50	-100	100~600	-5	-1
			UMB8	IMB8A	DTA114TK × 2	10	-50	-100	100~600	-5	-1
			-	IMB14A	DTA144TK × 2	47	-50	-100	100~600	-5	-1
			UMH3	IMH3A	DTC143TK × 2	4.7	50	100	100~600	5	1
			UMH4	IMH4A	DTC114TK × 2	10	50	100	100~600	5	1
			-	IMH15A	DTC144TK × 2	47	50	100	100~600	5	1
			UMH7	IMH7A	DTC143TK × 2	4.7	50	100	100~600	5	1
			UMH8	IMH8A	DTC114TK × 2	10	50	100	100~600	5	1
			-	IMH14A	DTC144TK × 2	47	50	100	100~600	5	1
			-	IMD1A	DTA124TK DTC124TK	22 22	-50 50	-100 100	100~600 100~600	-5 5	-1 1
			UMD6	IMD6A	DTA143TK DTC143TK	4.7 4.7	-50 50	-100 100	100~600 100~600	-5 5	-1 1
			-	IMD8A	DTA144TK DTC144TK	47 47	-50 50	-100 100	100~600 100~600	-5 5	-1 1

●Product Designation

Specify part No., packaging specification code and h_{FE} ranking code.



Part No.

Blank unless otherwise required

Packaging specification code

Package	UM6	IMD
Code	TL	T109
	TR	T108
	TN	T110

(Unit : mm)

Package	UM6	IMD (SOT-36)
Dimensions	<p>Each lead has same dimensions</p>	<p>Each lead has same dimensions</p>
	Actual size	Enlarged (×3.0)
	Actual size	Enlarged (×3.0)

●Packaging

Package	Packaging type	Packaging style	Direction	Code	Quantity /Package (pcs)	Quantity /Unit (pcs)
UM6	Taping	Embossed reel tape	Pin 1 side on sprocket hole side	TL	3,000	-
			Pin 1 mark side opposite of sprocket hole side	TR		
			Non-directional	TN		
IMD	Taping	Embossed reel tape	Pin 1 mark side opposite of sprocket hole side	T108	3,000	-
			Pin 1 side on sprocket hole side	T109		
			Non-directional	T110		

●Packaging Specifications

(Unit : mm)

UM6	IMD																		
<p>Reel</p>	<p>Tape</p>																		
<table border="1"> <thead> <tr> <th rowspan="2">Package</th> <th colspan="3">Size</th> </tr> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>UM6</td> <td>2.2±0.1</td> <td>2.4±0.1</td> <td>1.15±0.1</td> </tr> <tr> <td>IMD</td> <td>3.1±0.1</td> <td>3.2±0.1</td> <td>1.35±0.1</td> </tr> </tbody> </table>		Package	Size			A	B	C	UM6	2.2±0.1	2.4±0.1	1.15±0.1	IMD	3.1±0.1	3.2±0.1	1.35±0.1			
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