

Digital Transistors

Transistors with built-in resistors.

Available in various packages with a variety of built-in resistors to meet a wide range of needs.

● Product Designation

D	T	A	1	2	3	E		A
Part No.			Package code			Suffix (Except EM3)		
		Package		Code				
		EM3		E				
		UMT		U				
		SST		C				
		SMT		K				
		MPT		P				

EM3 of 100mA version has no suffix " A ".
DTA123E of UMT package should be denoted as DTA123EUA.

EM3 · UMT · SST · SMT

● 100mA Specifications

PNP Type Fig.1	NPN Type Fig.2	Resistance value		Package				V _{CC} (V)	I _O (mA)	G _i	V _O (V)	I _O (mA)
		R ₁ (kΩ)	R ₂ (kΩ)	EM3* Pd=150mW	UMT* Pd=200mW	SST	SMT					
DTA123E□A	DTC123E□A	2.2	2.2	○	○	○	○	50	100	20~	5	20
DTA143E□A	DTC143E□A	4.7	4.7	○	○	○	○	50	100	20~	5	10
DTA114E□A	DTC114E□A	10	10	○	○	○	○	50	50	30~	5	5
DTA124E□A	DTC124E□A	22	22	○	○	○	○	50	30	56~	5	5
DTA144E□A	DTC144E□A	47	47	○	○	○	○	50	30	68~	5	5
DTA115E□A	DTC115E□A	100	100	○	○	○	○	50	20	82~	5	5
DTA113Z□A	DTC113Z□A	1.0	10	○	○	○	○	50	100	33~	5	5
DTA123Y□A	DTC123Y□A	2.2	10	○	○	○	○	50	100	33~	5	10
DTA143Y□A	DTC143Y□A	4.7	22	○	○	○	○	50	100	56~	5	5
DTA123J□A	DTC123J□A	2.2	47	○	○	○	○	50	100	80~	5	10
DTA143X□A	DTC143X□A	4.7	10	○	○	○	○	50	100	30~	5	10
DTA143Z□A	DTC143Z□A	4.7	47	○	○	○	○	50	100	80~	5	10
DTA114W□A	DTC114W□A	10	4.7	○	○	○	○	50	100	24~	5	10
DTA114Y□A	DTC114Y□A	10	47	○	○	○	○	50	70	68~	5	5
DTA124X□A	DTC124X□A	22	47	○	○	○	○	50	50	68~	5	5
*DTA115U□	*DTC115U□	100	10	—	○	○	○	50	20	27~	5	5
DTA144V□A	DTC144V□A	47	10	○	○	○	○	50	70	33~	5	5
DTA144W□A	DTC144W□A	47	22	○	○	○	○	50	30	56~	5	5
DTA1D3R□A	DTC1D3R□A	2.7	1.0	○	○	○	○	50	30	20~	5	30

□ : Package code E U C K

PNP Type Fig.3	NPN Type Fig.4	Resistance value		Package				V _{CE0} (V)	I _C (mA)	Min.	Typ.	Max.	h _{FE}	
		R ₁ (kΩ)	R ₂ (kΩ)	EM3* Pd=150mW	UMT* Pd=200mW	SST	SMT						V _{CE} (V)	I _C (mA)
DTA143T□A	DTC143T□A	4.7		○	○	○	○	50	100	100	250	600	5	1
DTA114T□A	DTC114T□A	10		○	○	○	○	50	100	100	250	600	5	1
DTA124T□A	DTC124T□A	22		○	○	○	○	50	100	100	250	600	5	1
DTA144T□A	DTC144T□A	47		○	○	○	○	50	100	100	250	600	5	1
DTA115T□A	DTC115T□A	100		○	○	○	○	50	100	100	250	600	5	1
*DTA125T□	*DTC125T□	200		—	○	○	○	50	100	100	250	600	5	1
DTA113T□A	—	1.0		○	○	○	○	50	100	100	250	600	5	1

□ : Package code E U C K

PNP Type Fig.5	NPN Type Fig.6	B-E Resistance		Package				V _{CE0} (V)	I _C (mA)	Min.	h _{FE}	
		R ₂ (kΩ)	R ₁ (kΩ)	EM3* Pd=150mW	UMT* Pd=200mW	SST	SMT				V _{CE} (V)	I _C (mA)
DTA114G□A	DTC114G□A	10		○	○	○	○	50	100	30	5	5
DTA124G□A	DTC124G□A	22		○	○	○	○	50	100	56	5	5
DTA144G□A	DTC144G□A	47		○	○	○	○	50	100	68	5	5
DTA115G□A	DTC115G□A	100		○	○	○	○	50	100	82	5	5

□ : Package code E U C K

- Notes : 1. *With recommended land pattern laid out.
2. Specification codes for PNP and NPN are omitted.
3. *Not for EM3.
4. EM3 has no suffix " A ".

● Low ON output type

PNP Type Fig.1	NPN Type —	Resistance value		Package				V _{CC} (V)	I _O (mA)	G _i	V _O (on) (V)		I _O (mA)		
		R ₁ (kΩ)	R ₂ (kΩ)	EM3* Pd=150mW	UMT* Pd=200mW	SST	SMT				V _O (V)	I _O (mA)	V _O (V)	I _O (mA)	
DTA214Y□	—	10	47	—	○	○	○	30	70	68	5	5	0.3	50	2.5

□ : Package code — U C K

SMT • MPT • SST

● 500mA Specifications

PNP Type Fig.1	NPN Type Fig.2	Resistance value		V _{CC} (V)	I _c Max.* (mA)	G ₁	V _o (V)	I _o (mA)	Package
		R ₁ (kΩ)	R ₂ (kΩ)						
DTB113E□	DTD113E□	1.0	1.0	50	500	33~	5	50	SMT • SST
DTB123E□	DTD123E□	2.2	2.2	50	500	39~	5	50	
DTB143E□	DTD143E□	4.7	4.7	50	500	47~	5	50	
DTB114E□	DTD114E□	10	10	50	500	56~	5	50	
DTB122J□	DTD122J□	0.22	4.7	50	500	47~	5	50	
DTB113Z□	DTD113Z□	1.0	10	50	500	56~	5	50	
DTB123Y□	DTD123Y□	2.2	10	50	500	56~	5	50	
DTB133H□	DTD133H□	3.3	10	50	500	56~	5	50	

PNP Type Fig.3	NPN Type Fig.4	Resistance value R ₁ (kΩ)	V _{CE0} (V)	I _c (mA)	Min.	Typ.	h _{FE} Max.	V _{CE} (V)	I _c (mA)	Package
DTB143T□	DTD143T□	4.7	40	500	100	250	600	5	50	
DTB163T□	DTD163T□	6.8	40	500	100	250	600	5	50	
DTB114T□	DTD114T□	10	40	500	100	250	600	5	50	

PNP Type Fig.5	NPN Type Fig.6	BE Resistance R ₂ (kΩ)	V _{CE0} (V)	I _c (mA)	Min.	h _{FE}		Package
						V _{CE} (V)	I _c (mA)	
DTB114G□	DTD114G□	10	50	500	56	5	100	SMT • SST

Notes : 1. *Characteristics of component transistors. 2. Specification codes for PNP and NPN are omitted.

● For Muting

PNP Type -	NPN Type Fig.2	Resistance value		V _{CC} (V)	I _c Max.* (mA)	G ₁	V _o (V)	I _o (mA)	R _{on} (Ω) Typ.	Package
		R ₁ (kΩ)	R ₂ (kΩ)							
-	DTC363E□	6.8	6.8	20	600	70~	5	50	1.0	SMT • SST

PNP Type -	NPN Type Fig.4	Resistance value R ₁ (kΩ)	V _{CE0} (V)	I _c (mA)	Min.	Typ.	h _{FE} Max.	V _{CE} (V)	I _c (mA)	R _{on} (Ω) Typ.	Package
-	DTC343T□	4.7	15	600	100	250	600	5	50	0.95	
-	DTC363T□	6.8	15	600	100	250	600	5	50	1.25	
-	DTC314T□	10	15	600	100	250	600	5	50	1.5	

Note : *Characteristics of component transistors.

● For Semipower

Fig.7 Part No.	Resistance value		V _{CC} (V)	I _c (A)	Pd* (W)	G ₁	V _o (V)	I _o (A)	Package
	R ₁ (Ω)	R ₂ (kΩ)							
DTDM12ZP	100	1	30	3	1.5	68~	2	0.5	MPT

Fig.8 Part No.	BE Resistance R ₂ (kΩ)	V _{CE0} (V)	I _c (A)	Pd* (W)	h _{FE}	V _{CE} (V)	I _c (A)	Package

Fig.9 Part No.	Resistance value		V _{CC} (V)	I _o (A)	Pd* (W)	G ₁	V _o (V)	I _o (A)	Package
	R ₁ (kΩ)	R ₂ (kΩ)							
DTDG23YP	2.2	10	60±10	1	1.5	300~	2	0.5	MPT

Fig.10 Part No.	BE Resistance R ₂ (kΩ)	V _{CE0} (V)	I _c (A)	Pd* (W)	h _{FE}	V _{CE} (V)	I _c (A)	Package

Notes : 1. *Characteristics of component transistors. 2. *Package mounted on ceramic 40×40×0.7mm

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Land pattern

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The base and emitter coating limits for Standard and Semi-Standard Products files

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Part Marking

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Equivalent circuit

General designation

DTA • DTB Series DTC • DTD Series

(Unit : mm)

Package	SMT (SC-59/Japanese SOT-23)	MPT (SOT-89)
	Package code K	Package code P
Dimensions	<p>TOP VIEW</p>	<p>TOP VIEW</p>
Actual size		
Enlarged (×3.0)		

Digital Transistors

Transistors

Land pattern

●Packaging Specifications

(Unit : mm)

Reel	Tape																							
EM3 · UMT · SST · SMT																								
	<table border="1"> <thead> <tr> <th>Package</th> <th>Code</th> <th>Package</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>EM3</td> <td>TR</td> <td>EM3</td> <td>TL</td> </tr> <tr> <td>UMT</td> <td>T107</td> <td>UMT</td> <td>T106</td> </tr> <tr> <td>SST</td> <td>T117</td> <td>SST</td> <td>T116</td> </tr> <tr> <td>SMT</td> <td>T147</td> <td>SMT</td> <td>T146</td> </tr> </tbody> </table>	Package	Code	Package	Code	EM3	TR	EM3	TL	UMT	T107	UMT	T106	SST	T117	SST	T116	SMT	T147	SMT	T146			
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Part Marking

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MPT (SOT-89)