

The Power of LED Light



DATA SHEET

5x7 DOT Matrix 5mm LED

Serie: M21B1001

5x7 DOT Matrix 5mm LED

Serie No.: **M21B1001**

Customer:

DRW:	Jason	CHKD	Wilson	MATL:	Wilson	TOLERANCE	Mason	DATE	19.01.2018
APPD:	Schumi			FINISH	Jamy		Sheet No.		1 from 8

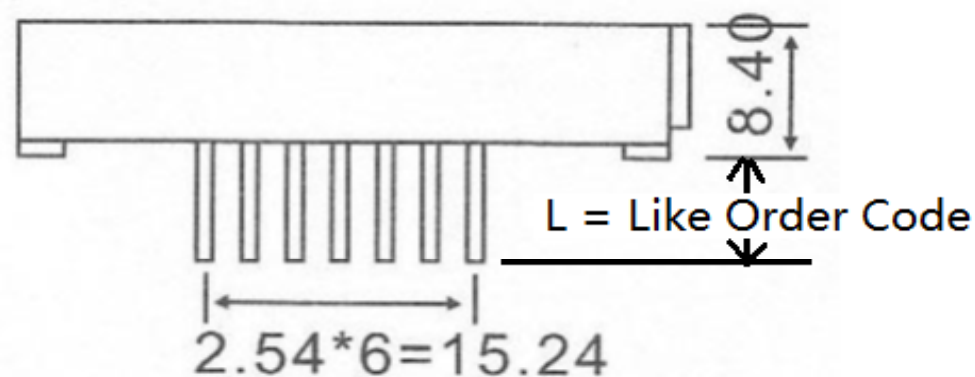
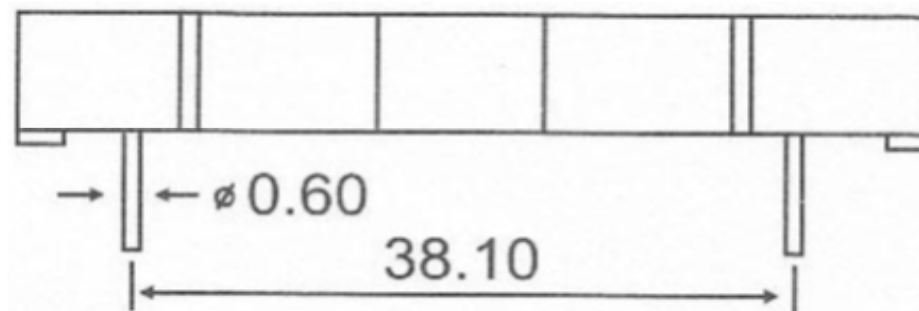
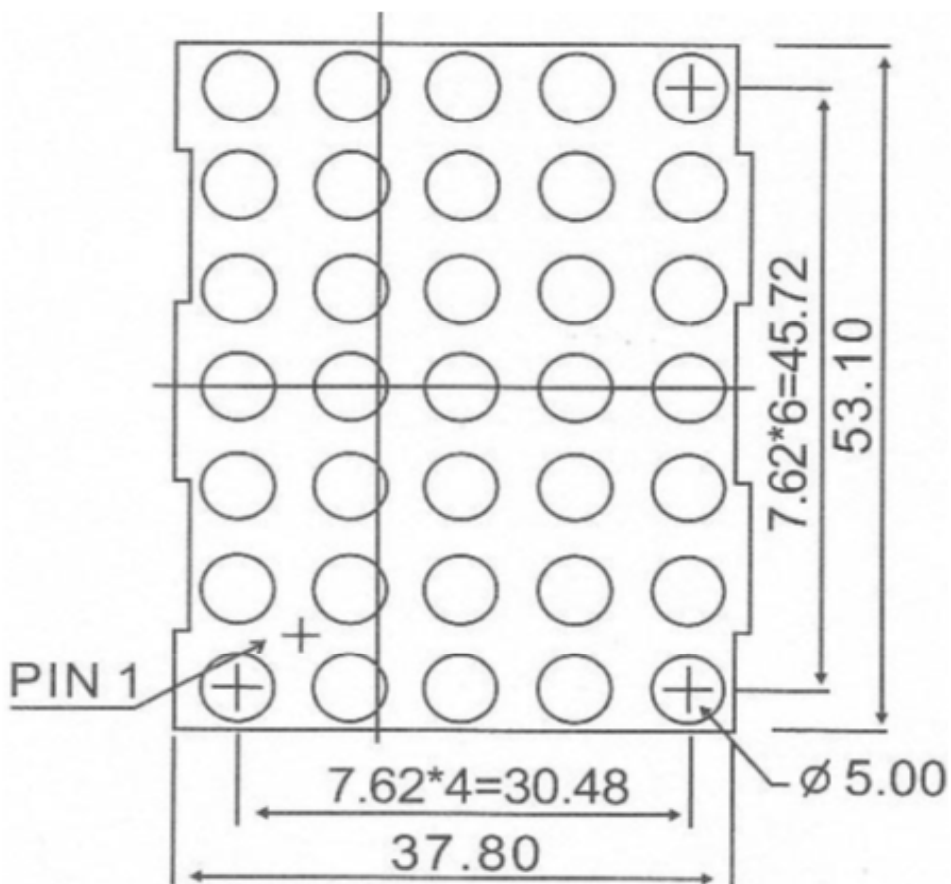
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Technical Dimensions

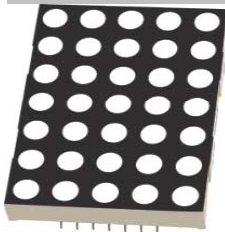


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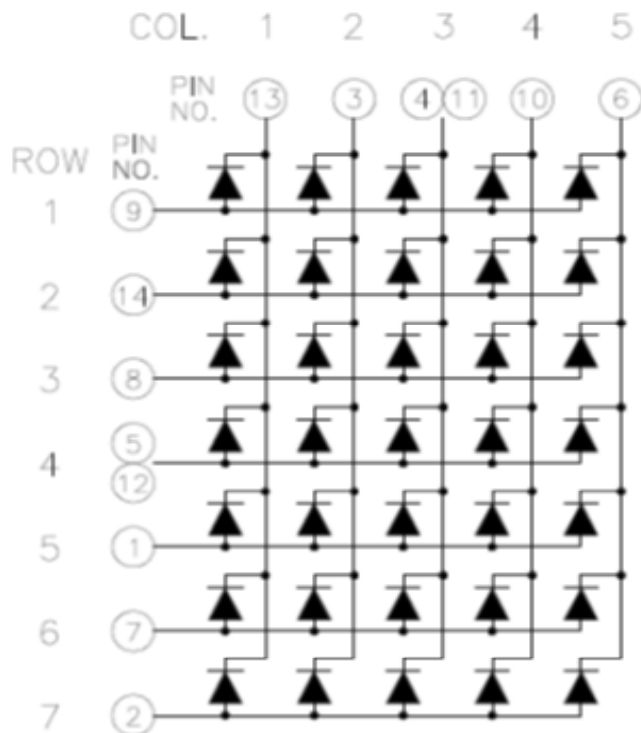
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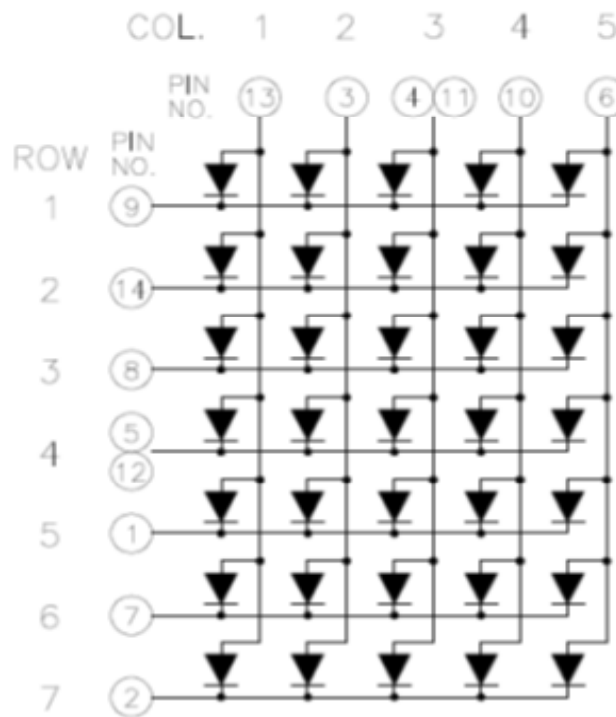
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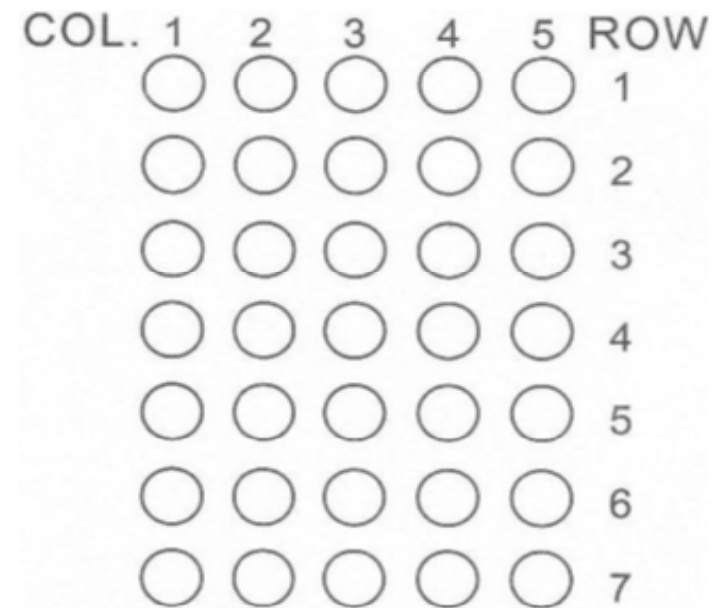
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Commun Anode



Commun Kathode



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Description

Emitting Order Code (nm)	Emitting Color	Dice Material	Peak Wave Length	Spectral Line Width	Forward Voltage (VF)		Luminous Intensity (Iv) Unit: mcd
					Unit:V	Unit:V	
700A	Red	GaP	700nm	90nm	2,20	2,50	5,0
660A	Hi Red	AlGaAs, (A)	660nm	20nm	1,80	2,20	15~20
660B	Super Red	AlGaAs, (B)	660nm	20nm	1,80	2,20	20~30
660C	Ultra Red	AlGaAs, (C)	660nm	20nm	1,90	2,40	26~48
640A	High Efficiency Red	GaAsP	640nm	45nm	1,90	2,40	50~80
630A	Orange	GaAsP	630nm	35nm	2,10	2,50	10~20
610A	Amber	GaAsP	610nm	35nm	2,10	2,50	15~20
590A	Yellow	GaAsP	590nm	35nm	2,10	2,50	15~20
570A	Green	GaP	570nm	30nm	2,10	2,50	14~18
645U	Ultra Hi Red	AlGaInP	645nm	20nm	2,10	2,50	80~50
630U	Ultra Orange	AlGaInP	630nm	20nm	2,10	2,50	180~120
610U	Ultra Amber	AlGaInP	610nm	20nm	2,10	2,50	90~120
590U	Ultra Yellow	AlGaInP	590nm	20nm	2,10	2,50	150~200
570U	Ultra Green	AlGaInP	570nm	30nm	2,20	2,50	60~100
520U	Ultra Pure Green	InGaN	520nm	36nm	2,80	3,80	260~310
505U	Ultra Blue Green	InGaN	505nm	36nm	2,80	3,80	260~310
430U	Blue	InGaN	430nm	30nm	2,80	3,80	10~20
470U	Ultra Blue Green	InGaN	470nm	30nm	2,80	3,80	80~90
405U	UViolett	InGaN	405nm		2,80	3,80	5~8
2930	White	InGaN	X=0,29 / Y=0,30		2,80	3,80	180~200
2931	Ultra White	InGaN	X=0,29 / Y=0,30		2,80	3,80	180~200

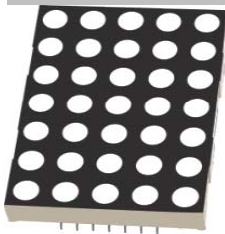
5x7 DOT Matrix 5mm LED

Color Code & Chip Characteristics: Test conditions: IF=20mA

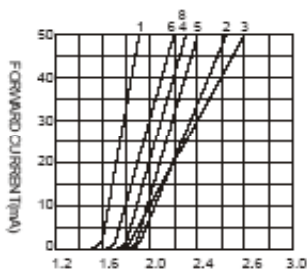
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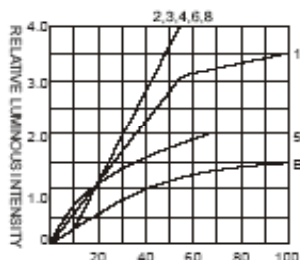
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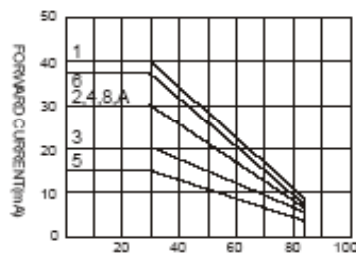
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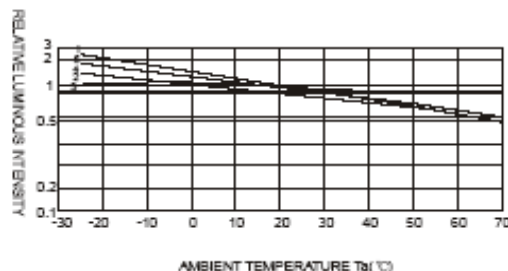
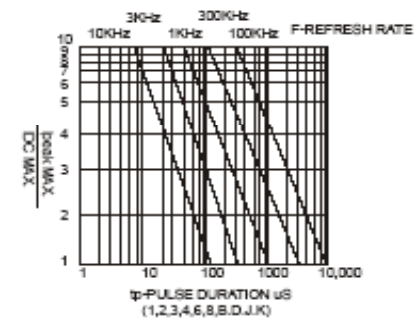
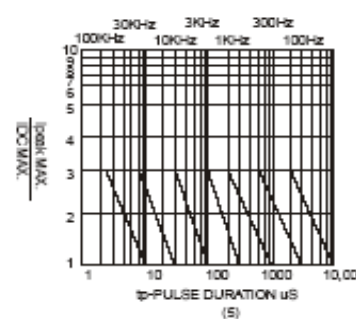
FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



AMBIENT TEMPERATURE Ta (°C)
FORWARD CURRENT VS. AMBIENT
TEMPERATURE



Note: 25°C free air temperature unless otherwise specified

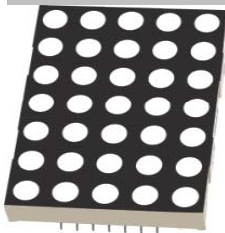
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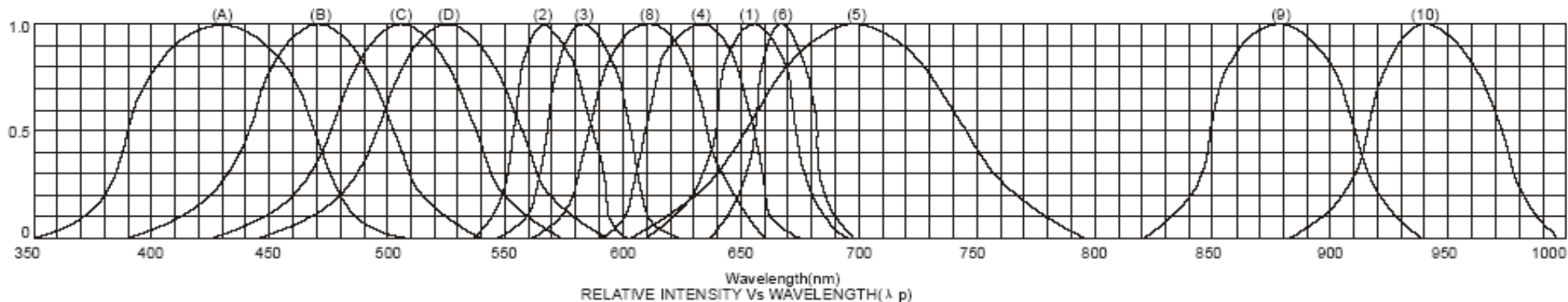
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Characteristics



- | | |
|---|----------------------------------|
| 1 GaAsPI/GaAs 655nm Red | 9 GaAIAs 880nm |
| 2 GaP 570nm / Yellow Green | 10 GaAs/GaAs & GaAiAs/GaAs 940nm |
| 3 GaAsP/GaP 585nm / Yellow | A GaN/SiC 430nm Blue |
| 4 GaAsP/GaP 635nm / Orange & Hi Eff Red | B InGaN/SiC 470nm Blue |
| 5 GaP 700nm Bright /Red | C InGaN/SiC 505nm Ultra Green |
| 6 GaAIAs/GaAs 660nm / Super Red | D InGaN/SiC 525nm Ultra Green |
| 8 GaAsPI/GaP 610nm / Super Red | |

Parameter	Symbol	Test Conditions	Value		Unit
			Min	Max	
Reverse Voltage	VR	IR=30 μ A	5	----	V
Forward Voltage	IF	----	----	30	mA
Power Dissipation	Pd	----	----	100	mW
Pulse Current	Ipeak	Duty= 0,1mS 1KHZ	----	150	mA
Operating Temperature	Topr	----	-40	+85	$^{\circ}$ C
Storage Temperature	Tstr	----	-40	+85	$^{\circ}$ C

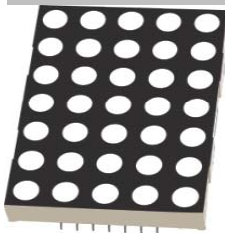
Absolute maximum ratings (Ta=25 $^{\circ}$ C)

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Ordering Informations

Serie	Emitting Colour	Diode Drive Code	Surface Colour	Epoxy Colour	(L) Lead Information	Special function	Special function	ROHS	Packing Code
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M21B1001	700	CA	B	W	32	N	N	R	TU
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Standard Ultra Bright

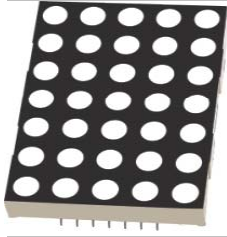
Standard	Ultra Brightn	CA= Commun Anode	W= White	W= White	32= 3,2mm Lead Length	N= No function	N= No function	R= ROHS Conform	TU= Tube
700A= Red	645U= Hi Red	CC= Commun Cathode	B= Black	B= Black	57= 5,7mm Lead Length			N= NON ROHS Conform	TY= Tray
660A= Hi Red	630U= Ultra Orange		R= Red	R= Red					
660B= Super Red	610U= Ultra Amber		N= Green	N= Green					
660C= Ultra Red	590U= Ultra Yellow		G= Gray	Y= Yellow					
640A= HE Red	570U= Ultra Green			C= Clear					
630A= Orange	520U= Ultra Pure Green								
610A= Amber	505U= Ultra Blue Green								
590A= Yellow	470U= Ultra Blue								
570A= Green	430U= Blue								
	405U= Ultra Violett								
	2930= White	2931= Ultra White							

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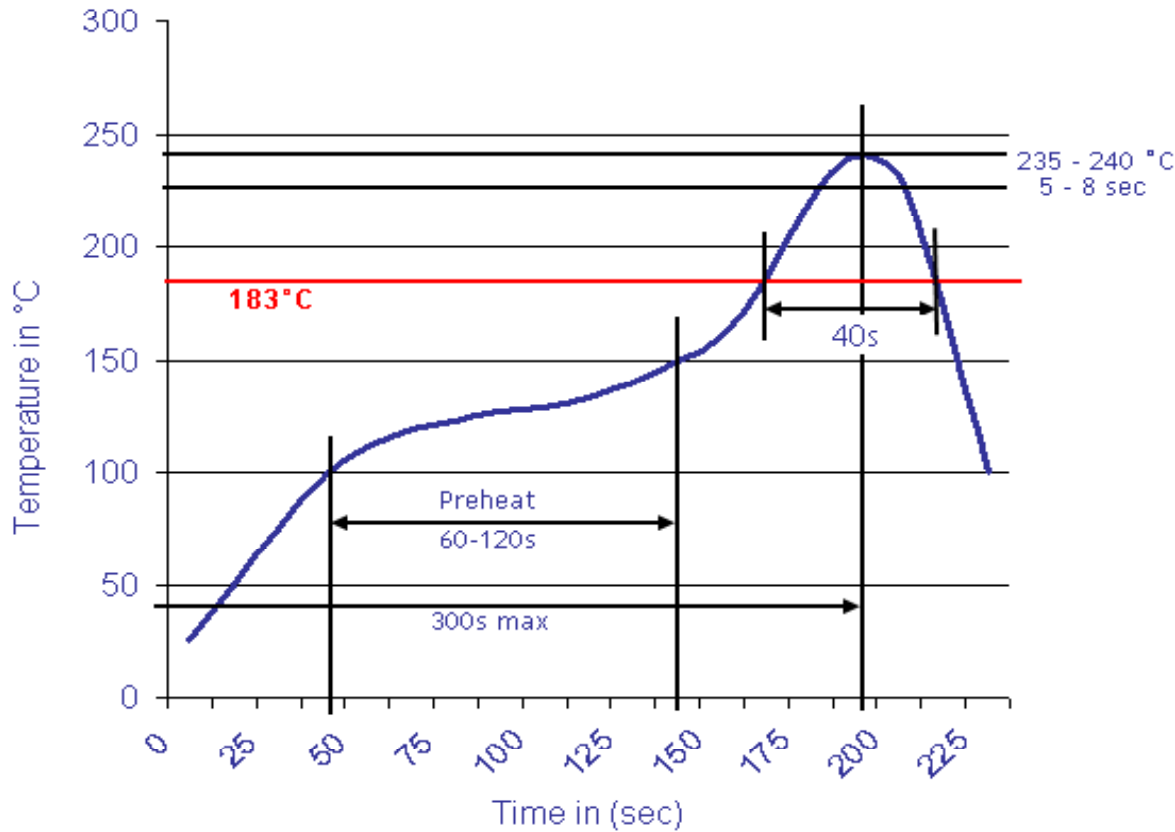


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Soldering Profile Curve

Classification Reflow Profile (JEDEC J-STD-020C)



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