## PROCEDURE TO ATTEND TEXAS INSTRUMENTS INDIA WEBENCH® DESIGN CONTEST ROUND 2

### STEP 1 : Click On Start Here

TEXAS INSTRUMENTS	TI university program	STEPS
Home Eligibility Contest Structure	Start Here Help	
	Texas Instruments India WEBENCH® Design Contest	
	Email	
	Password	
	Forget Password Submit New user	

# STEP 2 : Enter Your Email, Password and click Submit

				TI university program			
Home	Eligibility	Contest Structure	Start Here	Help			

Round 2:	Design	using	WEBENCH
----------	--------	-------	---------

Instructions:

- a. Please ensure that you have a my.Tl Account
- b. You must design using WEBENCH® as per the design specifications
- c. Simulate your design & capture the results
- d. Share your WEBENCH® design report through Share Design and as a PDF file via email to webench@stepsmail.com
- e. Click here for Round 2 help menu



## STEP 3: Select Take the design Challenge option

STEP 4: The Round 2 question window appears as below







Texas Instruments India WEBENCH® Design Contest

#### Design Challenge

Design a low cost synchronous buck converter.

#### **Design Specification**

- Vin(Min) = 10 V Vin(Max) = 15 V
- Vout = 5 V lout = 1 A
- Ambient temperature: 30 Degree Celsius
- IC should be a synchronous step down regulator
- IC should operate in advance eco-mode
- The efficiency should be greater than 90%
- Foot print should be less than 130mm<sup>2</sup>
- BOM cost should be less than 2\$ and the solution should have lowest BOM cost
- BOM count should be less than 10
- Should consist of Maximum WEBENCH<sup>®</sup> tools (minimum 5 tools)

STEP 5: Read the question carefully and click Start your design with WEBENCH®

STEP 7: You will redirected to TI WEBENCH® Design Center webpage

STEP 7: Use you're my TI username and password to log on to TI website and complete your design

using the WEBENCH® Designer

STEP 8: After completing	your design select Share Design Option	
by Destines Drokerte	- 日本等:算体由文:報告小文:和270:Decrani Buar:Dectanule:Deuterh Sevelifed View	a wabaach@staesmail.com + 6
Back New Solutions Visualizer BOM	Charts Schematic Optimize Op Vals Sim Thermal Build-it Life Edit Export Sim Export Sim Design Assistant	
	Share A Design 🛛 🗙	8
Optimization Tuning	Share With Individuals Share With Public	Enter Email ID as
IOM Cost	Enter the email address of the recipient. Separate multiple addresses with commas.	
Imailest Nighest wer		webench@stepsmail.com
Footprint 1 5 Efficiency	Design Name: Design #4148 from webench@stepsmail.com	0
E <sup>nn</sup> -	Add your notes for this design:	
Footprint BOM Cost Efficiency		
80 \$1.28 93		Enter Your Notes
Change Design Inputs	▲	
Advanced Options		
oft Start Time (ms):	Share this design Clear Cancel	
0.293ms < 0.293 ms < 100ms	How Share A Design works'	
(+ 250biz   +)	Enter a list of amail id's far each parson with which you want to share your design. You can share a design with	
Update	anyone, even if they are not a current user of WEBENCH. Each person will receive an email inviting them to	
En la constanti de	access a copy of the design. The sender will also receive an email confirmation for each invitation. If the person you invite is new to TI's web site, we will pre-create	
Current Design: #4148	Sign-On for them. A link in their email will take them to a page to finish their WEBENCH personal disk space	
Vinitin 10 V	reservation process, and the design is copied into their workspace. If they already have WEBENCH personal disk space, they will receive a different link taking them directly to their new design.	
Vinifiax 15 V	Remember that once conied a design remains independent All	
source DC	In Index Control Contr	-
Vout 5 V + Station	Net Over Very Very Very Very Very Very Very Ve	

After entering the Email ID and your notes select the Share the Design option to share the Report

#### - - - -...

STEP9: Select Pr	int Option			
Ay Designs/Projects		本語:資体中文:繁體中文:한국대:Русский Яз	ык   Portugués   Deutsch Stanied View Welcome web	ench@stepsmail.com +
Back New Solutions Visua	lizer BOM Charts Schematic Optimize C	dV dt Vals Sim Thermal Build-It Lite Edit	Export Sim Export Print Share Design Assistant	
		SUMMARY		F
Optimization Tuning	Charts	Schematic	WebTHERM <sup>TM</sup> Simulation	-
Lowest BOM Cost Smallest Highest	Viscit&VV Viscit&VV Viscit&VV			
Footprint 1 1 5 fefficiency Footprint BOM Cost Efficiency BO \$1.28 93 Change besign inputs Advanced Options Soft Start Time (ms):	1 (ded 1.0ed 1.0ed 1.0ed 1.0ed	Please Select Y Basic Design Report Thermal Simulation Report	our Report X srt SimDate 5-06-00 07:30:00.0	
0.293ms < 0.293 ms < 100ms	Operating Values	Bill o	omplete Design	
requency:	Mostly Operating Point	SOM Cost: \$1.25 *Footbrief to co	View My Orders	
L25MHz V Update Current Design: #4148 Dase_nn TP52143 • VinMin 10 V VinMax 15 V	No.         No. <td>Image         Marcol         Open         Image         Open         Open</td> <td>ORDER Evaluation Boards, Samples, ICs WEBEINCH Downloads: Design Documentation</td> <td></td>	Image         Marcol         Open         Image         Open         Open	ORDER Evaluation Boards, Samples, ICs WEBEINCH Downloads: Design Documentation	
source DC Vout 5 V • Name: TPS62143RGTR 10.0V-15.0V1	Name         Other         Comment         Description         Description <thdescription< td=""><td></td><td>SIM File Export</td><td></td></thdescription<>		SIM File Export	

Please select Basic Design Report Option and select Print report ---- Save the pdf file

STEP9: Again Se	elect P	<mark>rint</mark> Opt	ion						
ly Designs/Projects	_	_	<b>Bagilat</b>   日本語	語 简体中文	繁體中文   む	2;0     Русский Я	зык   Português   Deutsch	Simplifi view	Welcome webench@stepsmail.com
C Q		Charte Schomati			Thormal Rui			Drint Share Design	Arcistan
Dack New Solutions visue	nizei Dom	Charts Schemau	c opunize op	v005 500	SUMMARY	iu-it Lite Luit	Export Sint Export	Print Sindre Design	Applotoint
Optimization Tunks		Charte			Cohomatio		MANTHERMO	Classifica	
Lowest OM Cost		Efficiency (Log-Bole)	x P	A lease Select	0.3 A Fi Your Report		Wednerkw	Simulation	
Smallest Footprint	ec.co .	$\succ$	G Basi	ic Design Repor	rt port SimDate			•••	
BOM Cost Efficiency 80 \$1.28 93 Change Design Inputs	10.00 -			1 2	015-09-08 07:30:0	0.0	life of the second s	a a	
Advanced Options				Print Re	port Cano	el			
oft Start Time (ms):	1.0+4	1.0e-3 1.0e-2 0.10 IOURAL	1.00			_			
0.293ms < 0.293 ms < 100ms	0	Operating Values			Bill of Materials		Your Compl	ete Design	
Control Charles		Bodly Operating Faint		80W Cost: \$1.28 -Fool	ormi is component facilities	Epiús 1mm per side.	Product Folder	View My Orders	
1.25MHz .	Vie: 16.00 lout	1.00 Experi		Paul Bouch Burt III De Multele ORM21 Dest Multele ORM21	0 Pel Afernales - En- 7 38 - Depetition - 7 3 38 - Depetition - 7	Des View F-cl.	ORDER Evaluation Bo	ards, Samples, ICs	
Update	NOR Gount Galanting Charlen	8 General EATEA Dement WY Proved	1 ptvl. Decisin, SD/9 1 Unioust instruction 1970 Unioust unious internation	Des Derseyn OL210	1 80/ De+1267, 2		WEBENCH I	)ownloads:	
Current Design: #4149	Gast Ce Date Dedw Ethiowice	201 Cover 201 Vite Cover 22 KTN Dis Covert	Cytruit dependent or Date secte Steads state ethoren	for these provi	02943360 1 511 (territer) - 3	O Basing	Base		
base on TPS82443		Uprevid Clarienal 1.02V/mr Ulamenal 1.925A Distant	Solid Poul Print An Swittbring Insurants Paul an full survivi		Laberare 1	· ·	Uesign D	ocumentation	8
VinMin 10 V	102 ka 744 102 kg 102 kg	204/W Parent ESRN Parent 40.0/ees	Colorer December 12 cundion Jamese	m) 14444 (1) 184893	ster a		- CADI	To Funert	
VinMax 15 V	LICE Halsold. Los Aura REGI - CO	25 Seepting Ox Paint 5.383A Curves 1.884A De maint	RETURNED IN ADMINIST Annual instal dama tout tournal our				LAD F	ne export	
source DC	A los A DV Made	A 172A Durnell A 375V Prover COM Deveni	Pashing-pash indust Industry source dis Conduction Rode				📕 cm c	ilo Export	
Vout 5V		5N Uarwal C201 Uarwal C403 / View	Fobel ovtrust odwart Fobel SGIN Cost. Fobel Proceed Diseases				Sim r	ile caport	
	you pr Smut Dr Yest pre	15.007 Dis Parit 3.007 Dis Parit 3.708-07 Dis Parit	Construction asset Construction Culture Destruction could sufficient				Char	this dealars	
Name: TPS62143RGTR 10.0V-15.0V1							Sildie	s uno ucorgli	

Please select Thermal Simulation Report Option and select Print report ---- Save the pdf file

STEP10: From your Registered Email Id attach both the pdf files (Step 8, 9) and send a Email to webench@stepsmail.com.

Note : Designs submitted thru Share Design Option (STEP 8) and Pdf files (Step 8, 9) alone will be considered for evaluation. Both share design and pdf files are required for evaluation.